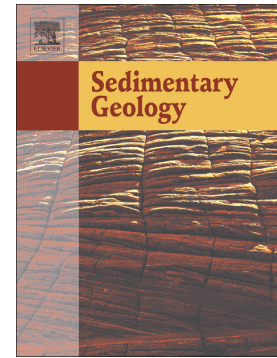


Accepted Manuscript

Petrography and stable isotope geochemistry of Oligocene-Miocene continental carbonates in south Texas: Implications for paleoclimate and paleoenvironment near sea-level

Conan Godfray, Majie Fan, Greg Jesmok, Deepshikha Upadhyay, Aradhna Tripathi



PII: S0037-0738(18)30029-0
DOI: doi:[10.1016/j.sedgeo.2018.02.006](https://doi.org/10.1016/j.sedgeo.2018.02.006)
Reference: SEDGEO 5312

To appear in:

Received date: 30 June 2017
Revised date: 14 February 2018
Accepted date: 15 February 2018

Please cite this article as: Conan Godfray, Majie Fan, Greg Jesmok, Deepshikha Upadhyay, Aradhna Tripathi, Petrography and stable isotope geochemistry of Oligocene-Miocene continental carbonates in south Texas: Implications for paleoclimate and paleoenvironment near sea-level. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Sedgeo(2018), doi:[10.1016/j.sedgeo.2018.02.006](https://doi.org/10.1016/j.sedgeo.2018.02.006)

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.

Petrography and stable isotope geochemistry of Oligocene-Miocene continental carbonates in south Texas: Implications for paleoclimate and paleoenvironment near sea-level

Conan Godfray¹, Majie Fan^{1*}, Greg Jesmok², Deepshikha Upadhyay², Aradhna Tripathi²

¹Department of Earth and Environmental Sciences, University of Texas at Arlington, Arlington, TX 76019, USA

²Department of Earth, Planetary, and Space Sciences, Department of Atmospheric and Oceanic Sciences, Institute of the Environment and Sustainability, University of California, Los Angeles, CA 90095, USA

Abstract

Cenozoic sedimentary rocks in the southern Texas Gulf Coastal Plains contain abundant continental carbonates that are useful for reconstructing terrestrial paleoclimate and paleoenvironment in a region near sea-level. Our field observations and thin section characterizations of the Oligocene and Miocene continental carbonates in south Texas identified three types of pedogenic carbonates, including rhizoliths, carbonate nodules, and platy horizons, and two types of groundwater carbonates, including carbonate-cemented beds and carbonate concretions, with distinctive macromorphologic and micromorphologic features. Based on preservations of authigenic microfabrics and variations of carbon and oxygen isotopic compositions, we suggest these carbonates experienced minimal diagenesis, and their stable isotopic compositions reflect paleoclimate and paleoenvironment in south Texas. Our Oligocene and Miocene carbonate clumped isotope temperatures ($T(\Delta_{47})$) are 23-28°C, slightly less than or

* Corresponding author: M. Fan. Email: mfan@uta.edu. Fax: 817 272 2628.

Download English Version:

<https://daneshyari.com/en/article/8908522>

Download Persian Version:

<https://daneshyari.com/article/8908522>

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