

Accepted Manuscript

High-resolution carbonate isotopic study of the Mural Formation (Cerro Pimas column), Sonora, México: Implications for early Albian oceanic anoxic events

J. Madhavaraju, Yong I.L. Lee, R.W. Scott, C.M. González-León, H.C. Jenkyns, J.C. Saucedo-Samaniego, S. Ramasamy



PII: S0895-9811(16)30159-6

DOI: [10.1016/j.jsames.2017.10.019](https://doi.org/10.1016/j.jsames.2017.10.019)

Reference: SAMES 1821

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

Received Date: 24 August 2016

Revised Date: 24 October 2017

Accepted Date: 24 October 2017

Please cite this article as: Madhavaraju, J., Lee, Y.I.L., Scott, R.W., González-León, C.M., Jenkyns, H.C., Saucedo-Samaniego, J.C., Ramasamy, S., High-resolution carbonate isotopic study of the Mural Formation (Cerro Pimas column), Sonora, México: Implications for early Albian oceanic anoxic events, *Journal of South American Earth Sciences* (2017), doi: 10.1016/j.jsames.2017.10.019.

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.

High-resolution carbonate isotopic study of the Mural Formation (Cerro Pimas column), Sonora, México: Implications for early Albian Oceanic Anoxic Events

J. Madhavaraju^{1*}, Yong IL Lee², R.W. Scott³, C.M. González-León¹, H.C. Jenkyns⁴, J.C. Saucedo-Samaniego⁵ and S. Ramasamy⁶

¹Estación Regional del Noroeste, Instituto de Geología, Universidad Nacional Autónoma de México, Hermosillo, Sonora 83000, México. E-mail: mj@geologia.unam.mx

²School of Earth and Environmental Sciences, Seoul National University
Seoul 151-747, Korea

³Geosciences Department, University of Tulsa and Precision Stratigraphy Associates
149 West Ridge Road, Cleveland OK 74020-5037

⁴Department of Earth Sciences, University of Oxford, South Parks Road,
Oxford OX1 3AN, UK

⁵Posgrado en Ciencias de la Tierra, Estación Regional del Noroeste, Instituto de Geología, Universidad Nacional Autónoma de México, Hermosillo, Sonora 83000, México.

⁶Department of Geology, School of Earth and Atmospheric Sciences
University of Madras, Guindy Campus, Chennai 600 025, India

ABSTRACT

The 420-m thick stratigraphic column of the Mural Formation that is exposed in the Cerro Pimas area of northern Sonora, Mexico, is composed of limestone lithofacies ranging from bioclastic wackestone to boundstone, whose biota is characterized by low diversity. Prominent age-diagnostic fossils are benthic foraminifera and long-ranging calcareous algae that indicate the Aptian/Albian boundary is close to the base of the Los Coyotes Member. The carbonates of this formation have negative to positive $\delta^{13}\text{C}$ values (–4.63 to +2.6‰) and highly depleted $\delta^{18}\text{O}$ values that range from –12.74 to –8.34‰. The absence of correlation between $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ values supports a primary marine origin for the $\delta^{13}\text{C}$ values of these limestones.

Download English Version:

<https://daneshyari.com/en/article/8907748>

Download Persian Version:

<https://daneshyari.com/article/8907748>

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