

Accepted Manuscript

Influence of pre-tectonic carbonate facies architecture on deformation patterns of syntectonic turbidites, an example from the central Mexican fold-thrust belt

Alberto Vásquez Serrano, Gustavo Tolson, Elisa Fitz Diaz, Gabriel Chávez Cabello



PII: S0191-8141(18)30090-7

DOI: [10.1016/j.jsg.2018.02.004](https://doi.org/10.1016/j.jsg.2018.02.004)

Reference: SG 3598

To appear in: *Journal of Structural Geology*

Received Date: 1 January 2017

Revised Date: 9 February 2018

Accepted Date: 11 February 2018

Please cite this article as: Vásquez Serrano, A., Tolson, G., Fitz Diaz, E., Chávez Cabello, G., Influence of pre-tectonic carbonate facies architecture on deformation patterns of syntectonic turbidites, an example from the central Mexican fold-thrust belt, *Journal of Structural Geology* (2018), doi: 10.1016/j.jsg.2018.02.004.

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1 **Influence of pre-tectonic carbonate facies architecture on deformation patterns of**
2 **syntectonic turbidites, an example from the central Mexican Fold-Thrust Belt.**

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4 Alberto Vásquez Serrano*¹, Gustavo Tolson², Elisa Fitz Diaz², Gabriel Chávez Cabello³

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6 ¹Posgrado en Ciencias de la Tierra, Instituto de Geología, Universidad Nacional Autónoma
7 de México, Avenida Universidad 3000, C.U., Coyoacán, D.F., 04510, México.

8 ²Departamento de Geología Regional, Instituto de Geología, Universidad Nacional
9 Autónoma de México, Avenida Universidad 3000, C.U., Coyoacán, D.F., 04510, México.

10 ³Facultad de Ciencias de la Tierra, Universidad Autónoma de Nuevo León, Carretera a
11 Cerro Prieto km 8, Hacienda de Guadalupe, Apartado Postal 104, Linares, Nuevo León,
12 67700, México.

13 *Author to whom correspondence should be addressed

14
15 **Abstract.**

16 The Mexican fold-thrust belt in central México excellently exposes relatively well
17 preserved syntectonic deposits that overlay rocks with lateral lithostratigraphic changes
18 across the belt. We consider the deformational effects of these changes by investigating the
19 geometry, kinematics and strain distribution within syntectonic turbidites, which are
20 deposited on top of Albian-Cenomanian shallow and deep water carbonate layers. Field
21 observations and detailed structural analysis at different stratigraphic and structural levels
22 of the Late Cretaceous syntectonic formation are compared with the deformation as a
23 function of lithological and structural variations in the underlying carbonate units, to better
24 understand the effect of these lithostratigraphic variations on deformation, kinematics,

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