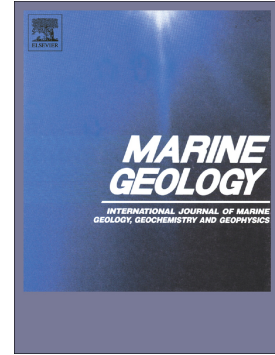


## Accepted Manuscript

Three dimensional seismic anatomy of multi-stage mass transport deposits in the Pearl River Mouth Basin, northern South China Sea: Their ages and kinematics

Qiliang Sun, Xinong Xie, David J.W. Piper, Jing Wu, Shiguo Wu



PII: S0025-3227(17)30241-4  
DOI: doi: [10.1016/j.margeo.2017.05.005](https://doi.org/10.1016/j.margeo.2017.05.005)  
Reference: MARGO 5621

To appear in: *Marine Geology*

Received date: 28 June 2016  
Revised date: 18 May 2017  
Accepted date: 20 May 2017

Please cite this article as: Qiliang Sun, Xinong Xie, David J.W. Piper, Jing Wu, Shiguo Wu , Three dimensional seismic anatomy of multi-stage mass transport deposits in the Pearl River Mouth Basin, northern South China Sea: Their ages and kinematics, *Marine Geology* (2017), doi: [10.1016/j.margeo.2017.05.005](https://doi.org/10.1016/j.margeo.2017.05.005)

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.

**Three dimensional seismic anatomy of multi-stage mass transport deposits in the Pearl River Mouth Basin, northern South China Sea: Their ages and kinematics**

Qiliang Sun<sup>a,b</sup>, Xinong Xie<sup>a,b</sup>, David J.W. Piper<sup>c</sup>, Jing Wu<sup>d</sup>, Shiguo Wu<sup>e</sup>

<sup>a</sup>*Key Laboratory of Tectonics and Petroleum Resources, China University of Geosciences, Ministry of Education, Wuhan 430074, China;*

<sup>b</sup>*College of Marine Science and Technology, China University of Geosciences (CUG), Wuhan, Hubei 430074, PR China;*

<sup>c</sup>*Natural Resources Canada, Geological Survey of Canada (Atlantic), Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2, Canada;*

<sup>d</sup>*Shenzhen Branch of CNOOC Ltd., Guangzhou 510240, China;*

<sup>e</sup>*Sanya Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences, Sanya 572000, China*

**Abstract:** Three superimposed Quaternary mass transport deposits (MTD1, MTD2 and MTD3) in the Pearl River Mouth Basin of the northern South China Sea are identified using high-resolution three dimensional seismic data. This study dissects the three stacked MTDs in detail and interprets their distribution based on antecedent bathymetry and their kinematics from identified structures and sedimentological models. Each MTD is characterized by linear grooves at its base, by chaotic seismic reflections and complex internal structures, such as remnant, rafted and faulted blocks. The linear grooves and internal structures of MTDs indicate that the sediments

Download English Version:

<https://daneshyari.com/en/article/8912089>

Download Persian Version:

<https://daneshyari.com/article/8912089>

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