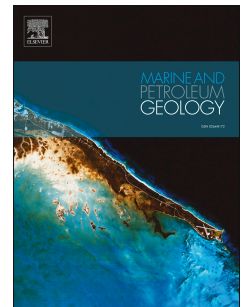


# Accepted Manuscript

Application of AVO attribute inversion technology to gas hydrate identification in the Shenhu Area, South China Sea

Xiangchun Wang, Dongyang Pan



PII: S0264-8172(16)30408-1

DOI: [10.1016/j.marpetgeo.2016.11.015](https://doi.org/10.1016/j.marpetgeo.2016.11.015)

Reference: JMPG 2738

To appear in: *Marine and Petroleum Geology*

Received Date: 17 October 2016

Revised Date: 14 November 2016

Accepted Date: 14 November 2016

Please cite this article as: Wang, X., Pan, D., Application of AVO attribute inversion technology to gas hydrate identification in the Shenhu Area, South China Sea, *Marine and Petroleum Geology* (2016), doi: 10.1016/j.marpetgeo.2016.11.015.

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.

# Application of AVO Attribute Inversion Technology to Gas Hydrate Identification in the Shenhu Area, South China Sea

Wang Xiangchun<sup>1\*</sup>, Pan Dongyang<sup>1</sup>

<sup>1</sup> Key Laboratory of Geo-detection (China University of Geosciences, Beijing),  
Ministry of Education, China University of Geosciences, Beijing, 100083, PR China

**Abstract:** AVO (Amplitude Versus Offset) is a seismic exploration technology applied to recognize lithology and detect oil and gas through analyzing the feature of amplitude variation versus offset. Gas hydrate and free gas can cause obvious AVO anomaly. To find geophysical evidence of gas hydrate and free gas in Shenhu Area, South China Sea, AVO attribute inversion method is applied. By using the method, the multiple seismic attribute profiles and AVO intercept versus gradient (I-G) cross plot are obtained. Bottom-simulating reflector (BSR) is observed beneath the seafloor, and the AVO abnormal responses reveal various seismic indicators of gas hydrate and free gas. The final AVO analysis results indicate the existence of gas hydrate and free gas in the upper and lower layers of BSR in the study area.

**Key words:** gas hydrate, AVO, attribute inversion, BSR, free gas

## 1. Introduction

Gas hydrate is a kind of ice-like solid material composed of water

□Corresponding author: Wang Xiangchun, Room 225, Teaching Building 5, School of Geophysics and Information Technology, China University of Geosciences (Beijing), 100083. Email: wangxc@cugb.edu.cn

Download English Version:

<https://daneshyari.com/en/article/5782194>

Download Persian Version:

<https://daneshyari.com/article/5782194>

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