

# BULLETIN OF THE MARINE GEOLOGY

VOLUME 28 • NUMBER 1 • JUNE 2013



BULLETIN OF THE MARINE GEOLOGY VOL. 28 NUMBER 1 JUNE 2013 ISSN 1410-6175

BULL. MGI	VOL. 28	NO. 1	PAGE 1 - 50	BANDUNG, JUNE 2013	ISSN 1410-6175
-----------	---------	-------	-------------	--------------------	----------------

Accredited : LIPI No. 470/AU1/P2MI-LIPI/08/2012



**MARINE GEOLOGICAL INSTITUTE**  
RESEARCH AND DEVELOPMENT AGENCIES FOR ENERGY AND MINERAL RESOURCES  
MINISTRY OF ENERGY AND MINERAL RESOURCES

**PUSAT PENELITIAN DAN PENGEMBANGAN GEOLOGI KELAUTAN**  
BADAN PENELITIAN DAN PENGEMBANGAN ENERGI DAN SUMBERDAYA MINERAL  
KEMENTERIAN ENERGI DAN SUMBERDAYA MINERAL

# BULLETIN OF THE MARINE GEOLOGY

---

Vol. 28, No. 1, June 2013

---

## INSURED EDITOR

Director of Marine Geological Institute

## VICE CHIEF OF INSURED EDITOR

Head of Afiliation Division

## CHIEF OF EDITORIAL BOARD

Kris Budiono, M.Sc.

## VICE CHIEF OF EDITORIAL BOARD

Lili Sarmili, M.Sc.

## EDITORIAL BOARDS

Dra. Kresna Tri Dewi, M.Sc. (*micropaleontologist*)

DR. Ir. Ediar Usman, MT. (*marine geologist*)

Ir. Noor Cahyo Dwi Aryanto, MT. (*marine mineralogist*)

Ir. Agus Setyabudhi, M.Sc. (*marine geologist*)

## SCIENTIFIC REVIEWERS

Prof. Ris. DR. Ir. Udi Hartono (*petrologist*)

DR. Hermes Panggabean, M.Sc. (*sedimentologist-fossil Fuel*)

Prof. Ris. DR. Ir. Edi Prasetyo Utomo (*exploration geophysicist*)

Prof. Ris. I Gusti Ngurah Ardha, M.Sc. (*mineralogist*)

DR. Eng. Iman Ahmad Sadisun, ST., MT. (*technique geologist*)

DR. Ir. Khoiril Anwar Maryunani, MT. (*Biostratigraphy & paleoclimatologist*)

## PUBLISHER BOARDS

Asep Makmur, S.Si. (*Chief*)

Mustaba Ari Suyoko, ST., MT.

Ir. I Wayan Lugra

Sutisna

For communication of this publications, please contact :  
MARINE GEOLOGICAL INSTITUTE  
Jalan Dr. Junjuran 236, Bandung-40174, Indonesia  
Telephone : +62-22-6032020, 6032201, Fax : +62-22- 6017887  
E-mail : bulletin@mgi.esdm.go.id

Cover Figure : Sandstone of Teraya Formation at Subi Island (one of outer island of Indonesia Archipelago), (Photo: Godwin Latuputty)

## PREFACE

Bulletin of the Marine Geology publishes research committed to all scientific, geo-resource, and engineering aspects of coastal and offshore area. The bulletin is intended for researchers and engineers who seek solution to coastal and marine problem in engineering and marine geo-resources.

This publication is the first issue of year 2013 on marine and coastal geo-sciences published by Marine Geological Institute (MGI) of Indonesia.

The first editon on June 2013 presents five papers which is discussed about mineral, petrology, coastal, and gas reservoir.

Those papers are : Indication of Gold and Silver Occurrence at Sampit Bay, Kota Waringin Timur District, Central Kalimantan Province, The Petrology Characteristic of Granitoid Rock Based on Geochemical Analysis of Bajau Cape Coast and its Surrounding, West Kalimantan; The third paper is Coastal Characteristics of Papela and Adjacent Area, Rote Island, East Nusa Tenggara; The next paper is the study about The Images of Subsurface Tertiary–Quaternary Deposits Based on Ground Penetrating Radar Records of Subi Kecil Island, Natuna District, Riau Archipelago Province and Characteristic of Shale Gas Reservoir Using LMR (Lambda-Mu-Rho) Inversion: Case Study Barnett Shale, Fort Worth Basin Texas, USA

From the desk of editors, thank to all the authors who contribute valuable papers for the readers.

Editors

**BULLETIN OF THE MARINE GEOLOGY**

---

Vol. 28, No. 1, June 2013

---

**CONTENS**

<i>Indication of Gold and Silver Occurrence at Sampit Bay, Kota Waringin Timur District, Central Kalimantan Province</i> <b>I Wayan Lugra and Udaya Kamiludin .....</b>	1-11
<i>The Petrology Characteristic of Granitoid Rock Based on Geochemical Analysis of Bajau Cape Coast and its Surrounding, West Kalimantan</i> <b>Noor Cahyo Dwi Aryanto, E. Suparka, C.I. Abdullah and H. Permana .....</b>	13-20
<i>Coastal Characteristics of Papela and Adjacent Area, Rote Island, East Nusa Tenggara</i> <b>Nineu Yayu Geurhaneu and Udaya Kamiludin.....</b>	21-29
<i>The Images of Subsurface Tertiary–Quaternary Deposits Based on Ground Penetrating Radar Records of Subi Kecil Island, Natuna District, Riau Archipelago Province</i> <b>Kris Budiono.....</b>	31-41
<i>Characteristic of Shale Gas Reservoir Using LMR (Lambda-Mu-Rho) Inversion: Case Study Barnett Shale, Fort Worth Basin, Texas, USA</i> <b>Hagayudha Timotius, Awali Priyono and Yulinar Firdaus.....</b>	43-50



LEMBAGA  
ILMU PENGETAHUAN  
INDONESIA



Panitia  
Penilai  
Majalah  
Ilmiah



KAN  
Kantor Nasional  
Lembaga Sertifikasi Sistem Manajerial  
ISSN: 016-1001

# SERTIFIKAT

Nomor: 470/AU1/P2MI-LIPI/08/2012

## Akreditasi Majalah Ilmiah

Kutipan Keputusan Kepala Lembaga Ilmu Pengetahuan Indonesia  
Nomor 742/E/2012 Tanggal 7 Agustus 2012

Nama Majalah : Bulletin of the Marine Geology  
ISSN : 1410-6175  
Redaksi : Puslitbang Geologi Kelautan,  
Kementerian Energi dan Sumber Daya Mineral

Ditetapkan sebagai Majalah Ilmiah

## TERAKREDITASI

Akreditasi sebagaimana tersebut di atas berlaku selama 3 (tiga) tahun

Cibinong, 7 Agustus 2012  
Lembaga Ilmu Pengetahuan Indonesia  
Ketua Panitia Penilai Majalah Ilmiah-LIPI

Prof. Dr. Rochadi  
NIP 195007281978031001



## **MARINE GEOLOGICAL INSTITUTE**

**RESEARCH AND DEVELOPMENT AGENCIES FOR ENERGY AND MINERAL RESOURCES  
MINISTRY OF ENERGY AND MINERAL RESOURCES**

Jalan Dr. Junjunan No. 236, Bandung-40174, Indonesia

<http://www.mgi.esdm.go.id>, E-mail : [bulletin@mgi.esdm.go.id](mailto:bulletin@mgi.esdm.go.id); [bulletin\\_mgi@yahoo.com](mailto:bulletin_mgi@yahoo.com)

