

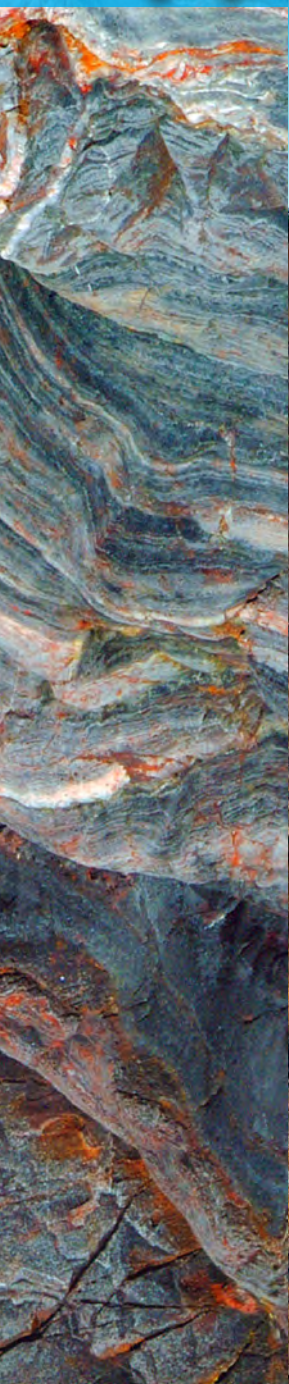


ISSN 0126 - 5539  
PP2509/07/2011(028111)

**PERSATUAN GEOLOGI MALAYSIA**

# **WARTA GEOLOGI**

**NEWSLETTER of the GEOLOGICAL SOCIETY OF MALAYSIA**



Jilid 36  
No. 4

OCTOBER-DECEMBER  
2010

Volume 36  
No. 4





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Warta Geologi (Newsletter of the Geological Society of Malaysia) is published quarterly by the Society. Warta Geologi covers short geological communications and original research, as well as reports on activities and news about the Society. It is distributed free-of-charge to members of the Society. Further information can be obtained from:

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*Cover photo: Mine pit of Rahman Hydraulic Tin, Klian Intan, Perak by Ng Tham Fatt*



# CATATAN GEOLOGI GEOLOGICAL NOTES

## A short note on the discovery of Early Devonian tentaculite-bearing unit from Taunggyi-Taungchun range, Southern Shan State, Myanmar

AYE KO AUNG

Department of Geology, University of Malaya, 50603, Kuala Lumpur, Malaysia,  
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**Abstract**— The Devonian limestone unit, which contains tentaculites, is reported for the first time from the Taunggyi town area, in the southern Shan State. They occur in the narrow outcrop between the Linwe Formation of Silurian age and the Permian to Triassic “Plateau Limestone Group”. The Taungchun tentaculites are small, thin-shelled, composed of ringed and unringed group of similar proportion. They closely resemble those from the Mahang Formation of Perak and Lalang Member of the Timah Tasoh Formation, Perlis, northwest Peninsular Malaysia. The unit is correlatable with the Early Devonian Zebingyi Formation of Pyin Oo Lwin Township, Mandalay Division and possible equivalents of the latter in the southern Shan State.

**Keywords:** Tentaculite-bearing unit, Taungchun, Taunggyi, Myanmar

### INTRODUCTION

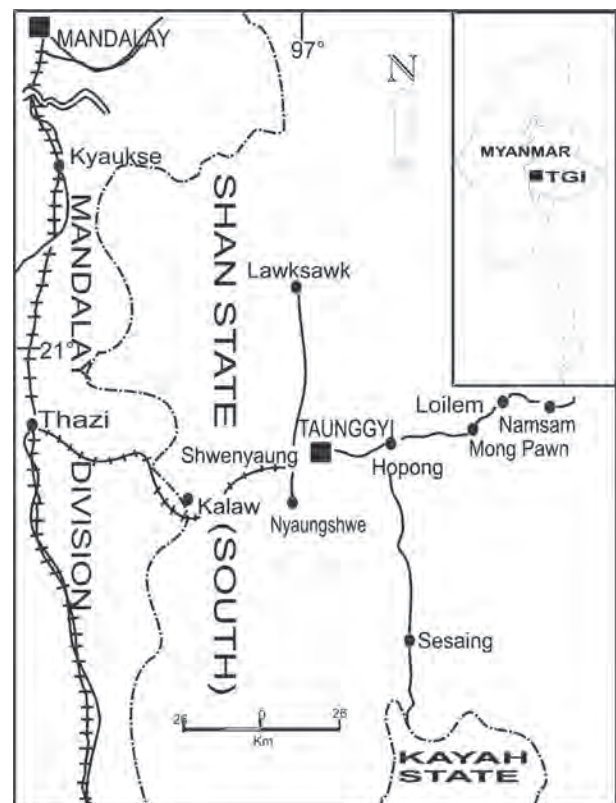
A small limestone fragment containing many tentaculites from a small outcrop of purple limestone in the southern part of the Taungchun range, east of Taunggyi (Figure 1) was discovered in July 1992 by the author. Although Middle and Upper Paleozoic strata are rather widely distributed in the Taunggyi town area, no tentaculite-bearing unit of the Devonian age has been reported to date. The author had made a short trip to Taungchun range with U Sai Myo Tint of the Department of Geology, University of Taunggyi who wished to ascertain the age of the purple-coloured argillaceous limestone, which occur at the western spur of the Taungchun range. The Taunggyi town area was previously mapped by Myint Lwin Thein (1972) and Myint Khaing (1991). The present author was able to remap the Taunggyi town area and stratigraphically measure the tentaculite-bearing unit in the southern part of the Taungchun range with the assistance of Honours students from the Geology Department of Taunggyi University in 1993. More specimens containing fragments of poorly preserved tentaculites were also collected. This report includes distribution, lithology, faunal content, discussion on the age, and stratigraphic relationship of the unit.

### DEVONIAN LIMESTONE LENS

#### Distribution and thickness

This unit is locally developed between Dattawkyo and Shwe Moke Htaw pagodas (Figure 2). A small section

was measured at 30m southeast of Dattwkyo Pagoda where the Devonian limestone is well exposed on both sides of a narrow path. The maximum thickness of the unit is 10.7 m.



**Figure 1:** Location map of the Taunggyi town area.

**Lithology and sequence**

The lower part of the unit is dominated by thick-bedded lime-mudstone with occasional thin beds of fine sandstone. Purple, calcareous siltstone with abundant tentaculites occur at the base of the section (Figures 3a & 3b). The lime-mudstone is silty micrite consisting of angular detrital silt and sand-sized quartz grains (10-15%) with small scattered fragments of tentaculites in micritic matrix. The upper part of the unit, features thicker and medium bedding and is composed chiefly of light to dark grey lime-mudstone. Phacoidal structured silt patches are occasionally noted on the erosional surface of the bedding. The clastic, bioclastic and terrigenous silt contents decrease in the upper part of the section and there is no trace of fossils.

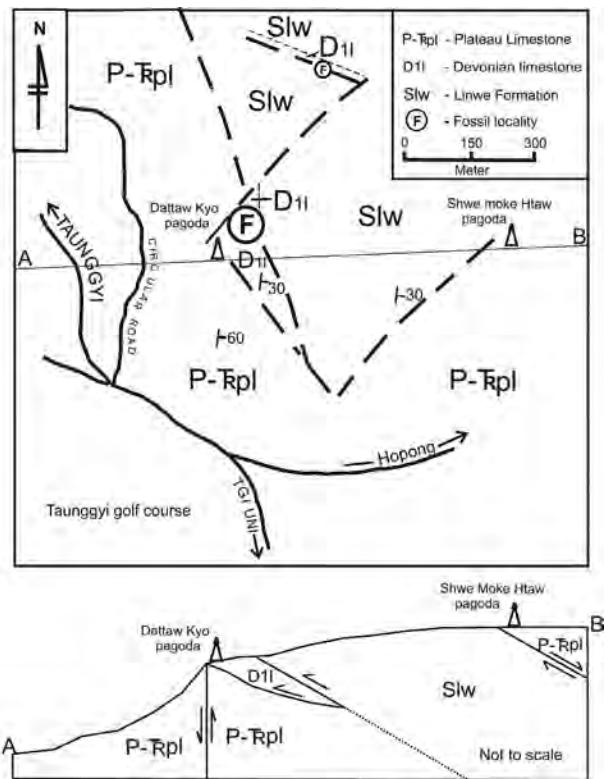
**Stratigraphic relationship**

The unit occurs in a narrow ridge between two major faults (Figure 2) so that the stratigraphic relationships between this unit and those above and below are invisible. However, it may be presumed that the present unit and stratigraphically older unit, that is the Linwe Formation of Silurian age are faulted against the younger unit, the “Plateau Limestone Group” of Permo-Triassic age.

**TAUNGCHUN TENTACULITES**

The Taungchun tentaculites are small, 1.5-9 mm in length, thin-shelled forms. A drop-like apical bulb is seen in only one specimen. There are two basic types, ringed and unringed of similar proportions (Figures 3c & 3d). The Taungchun tentaculites are closely compared with those from the Mahang Formation of Kampong Pahit, Perak, northwest Peninsular Malaysia (Burton 1967a) in size range and shape and proportion of the constituted fauna. The Malaysian ringed tentaculites are also long, as much as 8 mm and have wider spaced (4 to 6) rings per mm. Interspaces are wide and flat with fine longitudinal ribs numbering between 4 and 7 in 0.2 mm Boucek (in Burton, 1967b) says that “the Malayan ringed tentaculites commonly proved to be closed to Lower Devonian *Nowakia acuarina*.....and I think it is possible to correlate the beds with lower Emsian (middle part of Early Devonian)”. The Taungchun tentaculites are very closely similar to those identified as *Nowakia acuarina* of the Lalang Member of the Emsian Timah Tasoh Formation from Perlis in northwest of Peninsular Malaysia of Meor Hafif Hassan (2004) (Table 1).

The Taungchun tentaculites might have close similarity to *Nowakia acuarina* of the Zebingyi Formation in Pyin Oo Lwin township described by Aye Ko Aung (in prep.) from the Early Devonian (Pragian) Khin Zo Chang limestone Member of the Zebingyi Formation (Aye Ko Aung, 2008). The only difference between those forms is that the Zebingyi specimens bear more than 80 percent of ringed tentaculites whilst they form only 60 percent or less in the Taungchun specimens.



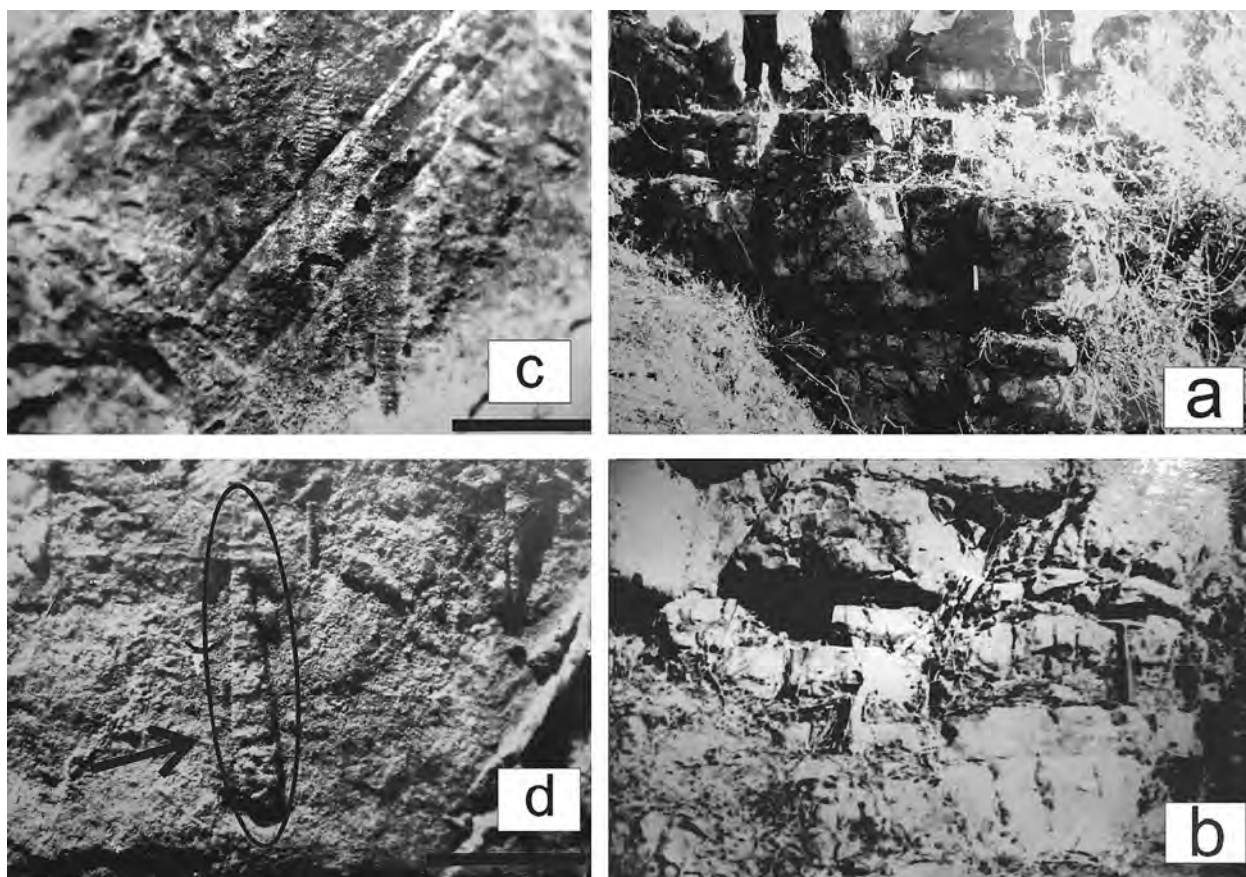
**Figure 2:** Geological map and schematic cross-section of the Taunggyi-Taungchun hill.

**DISTRIBUTION AND AGE OF TENTACULITES IN MYANMAR**

In Pyin Oo Lwin township, Mandalay Division, tentaculites are common in the Zebingyi Formation of Pragian (Aye Ko Aung, in prep.), Late Pragian to ?Early Emsian (Early Devonian) (Jaeger, 1983), Pragian to Emsian (Kyaw Min & Aye Ko Aung, 2010). Some are also found in the Padaukpin limestone of the Maymyo Formation of Eifelian (early Middle Devonian) (Anderson *et al.*, 1969).

The tentaculite-bearing unit, regarded as of the same age to the Zebingyi Formation was also seen on the eastern flank of the Zawgyi Basin (Pascoe, 1959) at Myozo (Minswe per. com., 1992), Pinpyit (Htay Lwin per. com. 1996), in Lawksawk township. Wolfart *et al.* (1984) recorded possible equivalents of the Zebingyi Formation in the southern Shan State: from Nyaungshwe, northeast shore of the Inle Lake; in the Mibaya Taung area, south of Heho plain; and near Pingpet, southeast of Taunggyi. In the Taunggyi town area, the author also found a possible Devonian black carbonaceous limestone in a small creek at the eastern foot of west Pinsin Hill. The limestone yielded a number of thin-shelled brachiopods, tiny cephalopods, phacopic trilobites, fragments of tentaculites and crinoids (Aye Ko Aung, 1998). More Devonian units containing tentaculites are found to occur in the area around the Shwenyaung-Taunggyi railway cutting and in the Taunggyi town area: east of Shwe Phone Pwint pagoda, Kyagu, Stubomika hill and Sintaung. The stratigraphic details





**Figure 3:** a & b – Outcrop of Taungchun-tentaculites-bearing limestone, near Dattawkyo pagoda, Taung chun range, east of Taunggyi. c & d – Ringed and unringed tentaculites in the limestone exposure, scale bar = 4.5 mm.

**Table 1:** Comparison of tentaculites from Taungchun, Taunggyi, Myanmar and Perak and Perlis, northwest of Peninsular Malaysia.

Shell morphology	Taungchun, Myanmar Aye Ko Aung, 2010	Perak, Malaysia (Burton, 1967)	Perlis, Malaysia (Meor Hakif Hassan, 2004)
Shell length(in mm)	1.5-9	8.0	7.0
No. of rings in 1mm	6	4-6	Distal - 6 Medial - 7 Proximal - 17
No. of long. ribs	indistinct	4.7 in 0.2mm	Distal - 26-35
Ringed:unringed	similar	Ringed>unringed	Not mentioned

of the Taunggyi town area including this new localities have been described by the staff and students of Geology Department, Taunggyi University in the following years since 1996.

### ACKNOWLEDGEMENT

U Sai Myo Tint, former Assistant Lecturer of the Department of Geology, University of Taunggyi brought the author to Taungchun range where the present specimens were collected. Daw Nyo Myint of the Department of Geography from same university for the loan of airphotos of the Taunggyi town area. Professor Dr Myint Thein (Formerly the Head of Department, University of Mandalay), U Tin Aung Han (Retired Associate Professor, Department of Geology, Dagon University, and U Myint

Khaing, Retired Professor, Department of Geology, University of Taunggyi gave me valuable information on the distribution of the Zebingyi Formation. U Hlaing Htut Aung (Department of Transport Planning, Yangon), Aung Kyi, Aung Khant, Nanda Kyawswa, Sai Toe Toe, Maung Maung Pye (geology students from University of Taunggyi) and Kyaw Kyaw Nyein assisted me in the fieldwork. Professor B. K. Tan and Dr. T. T. Khoo (formerly of Department of Geology, University of Malaya, Malaysia encouraged me in the publication of this report. This paper has been greatly improved by the thorough reviews of Professor Dr Lee Chai Peng of Department of Geology, University of Malaya and Professor Dr Basir Jasin, School of Environmental Sciences and Natural Resources, Universiti Kebangsaan Malaysia.

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*Manuscript received 9 August 2010*  
*Revised manuscript received 12 October 2010*

## Geologists Strengthen Professionalism – Dialogue on Geologist Act

NICHOLAS JACOB<sup>1</sup>, ANIL NAIR<sup>2</sup> & ZAKARIA MOHAMAD<sup>1</sup>

<sup>1</sup>Minerals and Geoscience Department Malaysia

<sup>2</sup>UNIGEO Corporation Sdn. Bhd.

### Introduction

On 24 July 2008 the Geologists Act was tabled in the *Dewan Negara* and approved for implementation in the country. The Royal Consent was given on 2<sup>nd</sup> August 2008. This marks the culmination of an effort initiated in the 1980s by the Geological Society of Malaysia. The early 1990s saw the Society support the establishment of the Institute of Geology Malaysia (IGM) to pursue legal recognition of the profession in Malaysia Geologists Act. The IGM then pursued the matter that resulted in the Geologists Act, 2008 (Act 689).

The Geological Society of Malaysia organised a Dialogue on the Geologists Act on 11 June 2010, in conjunction with the National Geoscience Conference 2010, held at the Blue Wave Hotel, Shah Alam, Selangor, Malaysia. The aim was to highlight aspects related to the implementation of the Act to all practicing geologists in the country.

The Dialogue was moderated by Dr. Saim Suratman, former Secretary of the IGM. Panel Members were Dato' Yunus Abdul Razak, Director General of Minerals and Geoscience Department Malaysia, Mr. Robert Wong of Petronas Malaysia and Mr. Seet Chin Peng, an independent consultant. The Dialogue commenced with Panel Members providing background and various perspectives on the Act. This was followed by an open discussion involving participants from the floor. Highlights and key issues raised are summarised in the following section.

### Highlights

The main purpose of Geologists Act 2008 (Act 689) is to regulate the profession of the geology so as to be accepted and acknowledged as one of the professional services in Malaysia. The Act also seeks to strengthen professionalism amongst Geologists and enhance their knowledge and expertise. The Act has been gazetted and its implementation is expected to commence shortly. The Regulations to administer the Act have been approved by the Attorney General's Chamber in March 2010. A Rules of Procedure will provide guidance for the Board of Geologists to function.

All geoscientists, other than those in the public sector of Malaysia, performing work or running a business in various geoscience related fields (as listed in Schedule 2 of the Act) are required to register with the Board of Geologists. There are 4 categories of registered geologists. These are:

1. Registered Professional Geologist;
2. Registered Graduate Geologist;
3. Registered Foreign Geologist; and
4. Registered Practicing Geologist (for non-geologists performing geological work).

The Board of Geologists regulates registration of members under the Act. The Minister appoints members of the Board and all members shall be Malaysians. As stipulated in the Act, the Board comprises "a Chairman, who shall be a registered professional geologist; a representative of the IGM; five members who shall be registered professional geologists in the public service or in the service of any local authority or statutory authority; five members who shall be registered professional geologists in private practice or in the full-time employment of any person or body of persons other than the public services or any local authority or statutory authority; and two other persons who, in the opinion of the Minister, are able to contribute to the development of the profession". The Board is essentially empowered to regulate the practice of geology in the country. It may establish such committees as it considers necessary or expedient to assist it in the performance of its functions under this Act.

The initial registration exercise will see all current Malaysian IGM members automatically qualify as a Registered Geologist under the Act. Membership requirements and criteria to be accepted as a member of IGM can be found on their website. There is no examination requirement at the present time but this situation may change in the future. Foreigners are allowed to be registered on an annual renewal basis.



PETRONAS is subject to the Petroleum Development Act and employs over 1500 Geologists of which a significant number are foreigners. However, many of the local geologists are not registered with the IGM to qualify for automatic registration. Discussion is now ongoing with PETRONAS to resolve amicably, the issue of registering both the local and foreign geologists that they employ in accordance with the Geologists Act, which applies to individual practitioners and not institutions.

### Concluding Remarks

There are still many “teething” problems that will require some fine tuning before the Geologists Act is fully implemented. The process of implementation should be paced carefully to resolve all issues in a proper, professional and orderly manner. It is heartening to note that discussions are currently ongoing and implementation is anticipated in 2011.

### Acknowledgement

The authors would like to express their sincere appreciation and gratitude to the Moderator and Panel Members for generously sharing their experience and insight. All individuals who contributed to the organisation of the dialogue and the preparation of this report, in particular the staff of the Minerals and Geoscience Department of Selangor and Universiti Kebangsaan Malaysia, are also acknowledged.





# CERAMAH TEKNIK TECHNICAL TALK

## Assessment of suitability of rock masses in Peninsular Malaysia for mechanical excavation

(Penilaian kesesuaian jasad batuan Semenanjung Malaysia untuk pengorekan mekanikal)

ABDUL GHANI RAFEK (UKM)

13 Oktober 2010

Program Geologi, Universiti Kebangsaan Malaysia

Pada 13 hb Oktober 2010 (Rabu) bertempat di bilik Mesyuarat Geologi, UKM telah diadakan satu ceramah teknik yang bertajuk “Penilaian Kesesuaian Jasad Batuan Semenanjung Malaysia untuk Pengorekan Mekanikal” yang telah disampaikan oleh Prof. Dr Abd Ghani Rafek. Ia dihadiri oleh lebih 50 orang peserta yang terdiri daripada ahli-ahli persatuan, kakitangan akademik UKM, kakitangan MINT, IKRAM dan UNITEN serta pelajar-pelajar Program Geologi UKM.

**Abstrak—** Secara tradisi kaedah penerowongan gerudi dan letup telah lama dipraktikkan dan masih digunakan secara meluas walaupun mempunyai beberapa kekurangan. Salah satu sebab utama adalah kebolehsesuaian kaedah ini khususnya bila keadaan jasad batuan berubah-ubah. Secara bandingan mesin pengorekan keratan penuh perlu disediakan untuk keadaan bawah tanah dan jasad batuan yang spesifik dan kerap-kali menghadapi masalah bila keadaan jasad batuan berubah-ubah. Kosnya pula adalah terlampau tinggi untuk terowong pendek. Satu pilihan lain yang semakin bertambah penggunaannya berbanding dengan kedua-dua kaedah ini ialah penggunaan mesin pengorekan keratan separa. Mesin ini mempunyai kebolehsesuaian kaedah gerudi dan letup tanpa kekurangannya dan generasi terbaru mesin ini boleh digunakan dalam jasad batuan dengan kekuatan sederhana. Pembentangan ini mengimbas pengelasan beberapa jenis jasad batuan di Semenanjung Malaysia dan menilai kesesuaiannya untuk pengorekan dengan mesin keratan separa sebagai alternatif pada pematongan cerun batuan curam dan tinggi yang kerap-kali menghadapi masalah kestabilan jangka masa panjang.

**Abstract—** Traditionally tunnelling has been conducted employing the drill and blast method, which in spite of several shortcomings still finds widespread applications. One main reason for this is the flexibility offered by the drill and blast method especially in variable rock mass conditions. By comparison, the full face tunnelling boring machine or TBM needs to be tailored to a specific set of subsurface and rock mass conditions often encountering difficulties in variable rock mass conditions and its cost becomes prohibitive for short tunnels. An alternative that is gaining wider acceptance to both these subsurface excavation methods is the partial cross-section tunnelling machine, often referred to as a “roadheader”. These machines offer the flexibility of drill and blast without its disadvantages and the latest machines can excavate rock masses of moderate strength. This presentation reviews the classification of different types of rock masses in Peninsular Malaysia and assess their suitability for mechanical excavation employing the partial cross-section tunnelling machine as a possible alternative to cutting steep and high cut slopes in rock that very often are difficult to stabilise on a long term basis.

Mohd. Rozi Umor

# MALAM JURUTERA 2010

## Propagation of seismic shock wave in rocks and soils

LOW KAW SAI (UTAR)

## Design of embankment in soft ground to Eurocode 7 – development of Malaysian Annex

TAN YEAN CHIN (G&P)

## Road construction on peat

TOH CHENG TEIK (Consultant)

22<sup>nd</sup> October 2010, Department of Geology, University of Malaya, Kuala Lumpur

“Malam Jurutera 2010” featured 3 speakers, namely Sdr. Dr. Low Kaw Sai from UTAR, Sdr. Tan Yeian Chin (G&P) and Sdr. Dr. Toh Cheng Teik (Consultant)

Sdr. Low spoke on the propagation of seismic shock wave in rocks and soils, and the application to seismic design of structures such as high-rise buildings, bridges, etc. He also discussed the seismo-tectonic setting of Malaysia and surrounding regions, and showed some examples of earthquake events from around the world.

Sdr. Tan discussed the design of embankment in soft ground to Eurocode 7 and the development of the Malaysian Annex. Modes of failure, partial factors of safety for the embankment were included in the presentation. The famous Muar Trial Embankment was used as an example for illustration.

Sdr. Toh gave a very comprehensive and lengthy (60 mins. instead of the 30 mins. allocated) presentation on road construction on peat. The topics covered include properties and classification of peat, engineering parameters that can be derived from correlation with simple properties like water content, organic content, and computation of ground settlement due to primary and secondary consolidation of the peat. An interesting feature of peat is the high friction angles ( $\phi = 40-50^\circ$ ) due to the fibers in contrast to granular soils. Numerous local case histories (notably in Sibu, Sarawak) on road construction on peat were presented.

As usual, the talks were followed by various questions and discussions from the floor, ending at about 8 pm, with most participants staying back till the end.



Tan Boon Kong,  
Chairman,  
Working Group on Engineering Geology,  
Hydrogeology and Environmental Geology



# CERAMAH TEKNIK TECHNICAL TALK

## The Sunway Story: From Mining, Quarrying to Bandar Sunway Development

PHANG KOON TUCK (Sunway)

29 November 2010, Department of Geology, University of Malaya

The talk on “The Sunway Story: From Mining, Quarrying to Bandar Sunway Development” was delivered by Mr. Phang Koon Tuck (Sunway) on Mon. 29<sup>th</sup> Nov. 2010. Mr Phang gave an interesting account of the history of Sunway from the mining and quarry days, and how it was later transformed into its present state of Bandar Sunway, Shopping Mall, Sunway Lagoon, etc. Various technical issues were discussed, such as flood mitigation, slope stabilization, geotechnical issues dealing with the mine tailings and soft slime, etc. The talk ended with many questions and discussions from the floor.

**Abstract** — Bandar Sunway, an established township with well integrated commercial and residential centres located 5 km from Petaling Jaya, is actually a rehabilitated ex-mining land. For more than 50 years till the mid-80s, tin mining operation was carried out on this stretch of land. The quarrying for rocks to as deep as 200 feet below the general ground level was also undertaken, leaving a desolated landscape before development commenced in the late 80s. The transformation of this barren wasteland into a suitable area for construction of building, both technically sound and with a green environment, was a monumental task.

This talk explains the careful planning and exhaustive engineering works that were undertaken to transform the wasteland into suitable land for the construction of the township. These methods include programmed land fill, compaction, monitoring of settlement and proper subsoil and surface drainage system. There were also extensive stabilization work for the rock face damaged by previous blasting from quarrying operations. Further improvement of the environment saw the massive “greening” with the planting of very large number of trees and shrubs.

The Bandar Sunway of today is a thriving self-contained integrated resort city comprising residential houses, apartments and condominiums, commercial centres, educational institutions, medical centre, theme parks, hotels and shopping mall.

Tan Boon Kong,  
Chairman, Working Group on Engineering Geology,  
Hydrogeology & Environmental Geology



## CERAMAH TEKNIK TECHNICAL TALK

### Deep-seated landslides induced by recent earthquakes and rainstorms, and weathering profiles related to shallow landslides

MASAHIRO CHIGIRA (Disaster Prevention Research Institute, Kyoto University, Japan)

22 Disember 2010, Program Geologi, University Kebangsaan Malaysia

Sempena lawatan Prof. Dr. Chigira selaku penilai luar kursus Program Geologi, satu pembentangan ceramah teknik bertajuk “Deep-seated landslide induced by recent earthquakes and rainstorms, and weathering profiles related to shallow landslides” telah diadakan pada 22 hb Disember 2010 di bilik Mesyuarat Geologi UKM. Ceramah ini adalah anjuran bersama Persatuan Geologi Malaysia dan Program Geologi, UKM. Ia dihadiri oleh kira-kira 50 orang ahli geologi daripada UKM, UM, MINT, UNITEN dan IKRAM.

Mohd. Rozi Umor





## CERAMAH TEKNIK TECHNICAL TALK

### Natural hazards and climate (change) adaptation: Examples of facing multiple challenges from a geoscience-planning cooperation perspective

PHILIPP SCHMIDT-THOMÉ (Geological Survey of Finland)

### The German Geoparks Project

MICHAEL SCHMIDT-THOMÉ (Federal Institute for Geoscience & Natural Resources, Germany)

24 December, 2010, Minerals and Geoscience Department, Kuching, Sarawak

The above talks were jointly organized by the Mineral and Geoscience Department of Malaysia (JMG) and the Geological Society of Malaysia (GSM) held at JMG Kuching Office on 24<sup>th</sup> December 2010.

Interestingly the speakers were closely related; a father and a son. The first speaker, Dr Philipp Schmidt-Thome gave an interesting talk on the Natural Hazards and Climate Change and quoted a lot of examples from European countries. The second speaker, Dr Michael Schmidt-Thome delivered a lengthy talk on German Geoparks Project. He pointed out at the various scientific criteria, namely beautiful landscapes as elements required for a geopark status by the committees responsible for establishing world geoparks.

The talks were attended by about 80 participants comprising the geological staff JMG Kuching Office, representatives from government departments, lecturers from local institutions, local press members, individuals and representatives from private sectors.

A two days field excursion (27-28 December 2010) was organized for the participants together with both speakers in the Santubong Peninsular and Borneo Highland areas. The participants had enjoyed the talks and the field visits while both speakers enjoyed the green and tranquilizing beautiful Borneo Highlands.

Enggong Aji  
Minerals & Geoscience Department



PHILIPP SCHMIDT-THOMÉ



MICHAEL SCHMIDT-THOMÉ

# BERITA-BERITA PERSATUAN NEWS OF THE SOCIETY

## KEAHLIAN MEMBERSHIP

### Ahli Penuh / Full Member (Life)

- |                         |                         |
|-------------------------|-------------------------|
| 1. Robert Wong Hin Fatt | 3. Zulkefli Abdul Hamid |
| 2. Jamlus Md Yasin      | 4. Che Shaari Abdullah  |

### Ahli Penuh / Full Member

- |                             |                              |                          |
|-----------------------------|------------------------------|--------------------------|
| 1. Azirul Liana Abdullah    | 9. Rodzilah Rejab            | 17. Ahmad Farid Soratman |
| 2. Shafiza Abdul Aziz       | 10. Rinna anak Entika        | 18. Amri Samin           |
| 3. Firdaus Mohamad          | 11. Roszendy Danial          | 19. Shazwaniza Razali    |
| 4. Lee Mei Lu               | 12. Madzlan Zam              | 20. Tan Kian Chong       |
| 5. Fazira Zahari            | 13. Amran Mohd Sani          | 21. Tan Chooi Nee        |
| 6. Siti Arasy               | 14. Mohammad Nazri Tamby     | 22. Mison Ajum           |
| 7. Puteri Nurlina Mokhtar   | 15. Michael David Charnley   | 23. Wong Sing Wei        |
| 8. Mohd Hafizan Abdul Wahab | 16. Mohd Firdaus Abdul Karim | 24. Abdul Halim Mohammad |

### Ahli Pelajar / Student Member

- |                                    |                                     |   |
|------------------------------------|-------------------------------------|---|
| 1. Wong Yew Loong                  | 18. Nazmy Amir Hamidun Majid        | 36. Siti Nur Amirah Ismail              |
| 2. Chin Soon Mun                   | 19. Hazwan Syahmi Hashim            | 37. Hussien Nordin Saroji               |
| 3. Noor Farahin Mohamad Morshidi   | 20. Low Zoann                       | 38. Anis Salwa Abd Rani                 |
| 4. Muhammad Safwan Zulkifli        | 21. Lim Sook Fun                    | 39. Mohammad Haikal Asyraf Anuar        |
| 5. Mohd Zubair Mohd Azkah          | 22. Nor Aqilah Mohd Anuar           | 40. Ahmad Syazwi Ahmad Shukri           |
| 6. Che Zurida Che Lah              | 23. Azri Afif Rosli                 | 41. Muhammad Faidhi Afiq Mohamad Fozi   |
| 7. Muhammad Nabil Mohamed Yusoff   | 24. Nur Izzati Baba                 | 42. Syafiq Anwarie Azizan               |
| 8. Pua Ming Heng                   | 25. Nur'azri Nabilah Dahalan        | 43. Mohamad Hisham Mazlan               |
| 9. Hazim Irsyad Zaini              | 26. Nur Farahin Usop                | 44. Nurul Hannah Abdul Ghaffar          |
| 10. Azfar Hafizin Mustafa          | 27. Sofea Amiera Abdul Rahim        | 45. Amirul Asyraf Samsuri               |
| 11. Mohd Zulfadhli Abdul Wahid     | 28. Haziq Abdul Hanis               | 46. Aiman Fitri Zainal Abidin           |
| 12. Muhammad Fakhruz Razi Mutussin | 29. Siti Hajar Zamridin             | 47. Aidel Haikal Azmi                   |
| 13. Muhammad Hafiz Mat Kamal       | 30. Juliza Rehan                    | 48. Sharifah Amirah Sayed Ahmad Ghazali |
| 14. Nur Azleen Hussin              | 31. Johan Zainal Abidin             | 49. Nur Liyana Zulfakar                 |
| 15. Lee Shook Peng                 | 32. Muhammad Rasyidi Rosli          | 50. Syarifah Nur Ain Syed Khastudin     |
| 16. Muhsin Zainon                  | 33. Tan Su Quin                     | 51. Shafini Saupi                       |
| 17. Haiqal Hazreeq Hairi           | 34. Mohd Faizal Mohamed Akram       |   |
|                                    | 35. W Muhamad Aminin B W M Izzuddin |   |

### Ahli Bersekutu / Associate Member

- |                             |                |                   |
|-----------------------------|----------------|-------------------|
| 1. Aini Suhaiza Abdul Wahad | 2. Lee Kok Wei | 3. Liza Nor Idrus |
|-----------------------------|----------------|-------------------|

## PERTUKARAN ALAMAT CHANGE OF ADDRESS

1. Phlemon George, SIEP-UIX/V/O (Exploration Geoscientist), Shell International Exploration and Production B.V., Carel van Bylandtlaan 5, P.O. Box 162, 2501 AN The Hague, Netherlands
2. Ahmad Tajuddin Hj Ibrahim, 77, Jalan 14/30, 46100 Petaling Jaya
3. Wan Zawawie Wan Akil, SRD Bina S/B, Suite 1.1, 1st Floor, Lot 2643, Jalan Green, 93400 Kuching
4. Abdul Aziz Hussin, 4247, Jalan Iris 8, Indahpura, 81000 Kulai, Johor
5. Khairul Arifin Mohd Noh, Geoscience and Petroleum Engineering Department, Universiti Teknologi Petronas, Bandar Seri Iskandar 31750 Tronoh, Perak



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**NATIONAL  
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CONFERENCE 2011**

The Puteri Pacific Johor Bahru &  
Persada International Convention Centre  
11 – 12 June 2011

*Geoscientists and Ethics  
of a Sustainable Society*

Co-organiser  
Jabatan Mineral & Geosains Malaysia  
Universiti Teknologi Malaysia



Collaborators  
Universiti Teknologi Malaysia (UTM)  
Institute of Geology Malaysia (IGM)  
Universiti Kebangsaan Malaysia (UKM)  
Universiti Malaysia (UM)  
Universiti Malaysia Sabah (UMS)  
Universiti Teknologi Petronas (UTP)

**CALL FOR PAPERS**

**Deadlines**

Submission of abstract: 15<sup>th</sup> April 2011  
Submission of full manuscript: 31<sup>st</sup> May 2011  
Early Registration: 31<sup>st</sup> May 2011

**Registration**

All intending participants are advised to register early to facilitate the planning of the Conference. Registration fees will cover conference material, lunch and refreshment. Payment by crossed cheque or bank draft is acceptable and should be made payable to the "Geological Society of Malaysia". Payment can also be made by banking in directly to the Geological Society of Malaysia, Standard Chartered Bank, current account no. 794 1054 02263. Please fax or email the bank-in-advise slip to the Society for verification.

Membership	Early Registration	Late Registration
Presenters	RM 80	RM 100
Full/associate/life members	RM 80	RM 100
Non-members	RM 120	RM 140
Spouse/family of members	RM 50	RM 70
Student members	RM 30	RM 50
Student non-members	RM 50	RM 70
Children below 5 years	free	free

**Accommodation**

Accommodation is at the participant's own expense. Participants are advised to make early room reservations as the Conference coincides with school holidays. For reservation, please complete the attached Hotel Reservation Form and fax it directly to the hotel. For further information, please contact the hotel:

The Puteri Pacific Johor Bahru &  
Persada International Convention Centre  
Tel: +603 - 2715 0343  
Fax: +603-2032 2588  
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Website: www.puteripacific.com

**PERSATUAN GEOLOGI MALAYSIA**  
GEOLOGICAL SOCIETY OF MALAYSIA  
**NATIONAL GEOSCIENCE CONFERENCE 2011**

Name: \_\_\_\_\_  
Profession: \_\_\_\_\_  
Organisation: \_\_\_\_\_  
Address: \_\_\_\_\_  
Membership Type: \_\_\_\_\_  
Tel: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_  
Name & age (for children) of accompanying persons  
\_\_\_\_\_

I would like to attend NGC2011  
 I would like to join the Pre-Conference Fieldtrip  
 I would like to present the following paper(s):

1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please email the abstract(s) to geologicalsociety@gmail.my

Signature \_\_\_\_\_ Date \_\_\_\_\_



**PERSATUAN GEOLOGI MALAYSIA  
GEOLOGICAL SOCIETY OF MALAYSIA  
NATIONAL GEOSCIENCE CONFERENCE 2011**

The Geological Society of Malaysia is pleased to announce that the National Geoscience Conference 2011 (NGC2011), 24<sup>th</sup> in the annual series of conferences, will be held at the Puteri Pacific Johor Bahru & Persada International Convention Centre, Johor from 11<sup>th</sup> to 12<sup>th</sup> June 2011. The Conference is a premier geoscientific event in Malaysia, which is well attended by geoscientists from academia as well as the public and private sectors. NGC2011 is co-organised with Minerals & Geoscience Department Malaysia (MGG) and Universiti Teknologi Malaysia (UTM).

**Theme: Geoscientists and Ethics of a Sustainable Society**

Knowledge on the earth systems is the key element in formulating appropriate ethics for sustainability. With such knowledge geoscientists hold great responsibilities in addressing issues that put a sustainable future for human societies in jeopardy. The challenges are certainly enormous, which include utilising our knowledge as a tool to identify threats to sustainability and to develop viable solutions for these threats. Most importantly we are also obliged to instill sense of awareness on ethical frameworks of a culture that will pursue a sustainable society. Concerted efforts with other scientific communities are essential in promoting the importance of the ethical consequences in any scientific and engineering endeavors.

**Programme**

The technical program of NGC2011 consists of oral and poster presentations on all aspects of geoscience related to the theme. Presentations by keynote speakers on topics of relevance to the theme and interest to the nation is planned. There will be a one-day Pre-Conference Fieldtrip to Tanjung Piai National Park.

**Call for Papers**

Once again we seek your support to ensure the success of NGC2011. Participants are invited to present papers on original research either in English or Bahasa Malaysia for the Technical Sessions. Contributors may submit more than one paper, however the Organising Committee has the right to select only one paper by any first author for oral presentations, while the rest will be for poster presentations. Priority will also be given to papers with full manuscript.

Please come and share your experiences, ideas and expertise for the benefit of our country and future generations.

Those who would like to present papers are required to submit an extended abstract. The extended abstract should be between 500 to 750 words long, can have up to 3 figures and/or tables and must have at least 3 references. Abstracts of accepted papers will be distributed to all participants of NGC2011. Full papers will be reviewed and published in the Bulletin of the Geological Society of Malaysia. Manuscript requirements can be downloaded from <http://geology.um.edu.my/gsmpublic/NGC2011/Instruction.pdf>.

**Pre-Conference Fieldtrip**

**Location:** Tanjung Piai National Park  
**Date:** 10 June 2011 (Friday)  
**Number of participants:** Maximum 30  
**Charges:** RM 10.00 per person

Tanjung Piai (named after a local fern Paku Piai) forms the southernmost tip of Mainland Asia. Declared as State Park Wetland and RAMSAR Site on 31 January 2003, it is covered with 526 hectares of mangroves and 400 hectares of intertidal mudflats. It contributes to more than 4% of the total mangrove forest in Malaysia. The mangrove is typically a *Rhizophora apiculata*-*Bruguiera cylindrica* dominated coastal forest, is a home to 20 mangrove species and other mangrove-associated plants and animals. The forest has been managed and conserved to protect this particular shoreline of Johor.

**REGISTRATION FORM**

**PERSATUAN GEOLOGI MALAYSIA  
GEOLOGICAL SOCIETY OF MALAYSIA**



**NATIONAL  
GEOLOGICAL SOCIETY OF MALAYSIA  
CONFERENCE 2011**

The Puteri Pacific Johor Bahru &  
Persada International Convention Centre  
11 – 12 June 2011

*Geoscientists and Ethics  
of a Sustainable Society*

Please complete and return this form to:

National Geoscience Conference 2011  
Geological Society of Malaysia  
c/o Department of Geology  
University of Malaysia  
50603 Kuala Lumpur, Malaysia  
Tel: (603) 7957 7036 Fax: (603) 7956 3900  
Email: [geologicalsociety@gmail.com](mailto:geologicalsociety@gmail.com)

You may also download the pdf registration form from [http://geology.um.edu.my/gsmpublic/NGC2011/first\\_circular.pdf](http://geology.um.edu.my/gsmpublic/NGC2011/first_circular.pdf) and email the completed form to the above email address.



# BERITA-BERITA LAIN OTHER NEWS

## VISITING GEOLOGIST PROGRAMME 2010



14 October 2010

Geology Lecture Hall, Department of Geology, University of Malaya

A Visiting Geologist Programme has been organized by the University of Malaya Student Chapter of AAPG on 14th October 2010. The purpose of this talk is helping the students to prepare themselves better before venturing into the oil and gas industries. Mr. Chris Howells who is currently a Senior Geologist from Talisman Energy Inc. was invited to give a talk titled “Geologist Wanted” to all the students. Mr. Alan Fairley, the Recruitment Director from the OilWorld Jobs was the guest of our event. This event received great response from the participants. A satisfying number of students, about 90 participants, attended the talk. Lunch was served at 12.30 pm and the talk started at 1 pm.

Firstly, Mr. Chris Howells talked about various kinds of companies in the energy industries, namely service & support companies, independents, integrated and NCO/ NCOs. Brief descriptions were given for each kind of the companies stated above. Next, an overview of the different disciplines in the petroleum industries was given by Mr. Howells, including Geology, Geophysics and Engineering. Furthermore, Mr. Howells also shared some of his personal experience, including activities he had joined during his school times and things he had done to achieve what he has today. The talk ended with a Q & A session and a token of appreciation was given to Mr. Chris Howells by the advisor of UM Student Chapter of AAPG, Mr. Aminul.

The participants were motivated by the talk. Many of them stayed back to ask more questions and talk personally to Mr. Chris Howells and Mr. Alan Fairley.

Lee Si Ying

Event Secretary of Visiting Geologist Programme 2010  
University of Malaya Student Chapter of AAPG



## 6th International Symposium of IGCP516

9 – 14 November 2010

Department of Geology, University of Malaya, Kuala Lumpur, Malaysia

The 6<sup>th</sup> International Symposium of IGCP516 (International Geological Correlation Programme Project 516) consisted of a two-day scientific meeting and a four-day post-symposium excursion. Scientific sessions started on 9 November at 8:30 AM with a short welcoming speech by the Organizing Chairman Prof. Chai Peng Lee. Prof. Ken-ichiro Hisada, the Leader of the project, gave a welcoming address highlighting the aims and future successor to IGCP 516. Prof. Dr. Hamzah Hj. Abdul Rahman, Deputy Vice-Chancellor of Research and Innovation, University of Malaya declared the symposium open after his speech. This was followed by the signing of an MOU between University of Malaya and AIG University of Poland. He also launched the book *Geology of Peninsular Malaysia* (edited by C.S. Hutchison and D. N. K. Tan) written by staff of the Department of Geology and jointly published by the University of Malaya and Geological Society of Malaysia in 2009 during the opening ceremony. A copy of the book was presented to all participants together with the *Stratigraphic Lexicon of Malaysia* (Lee, *et al.*, 2004) and CD on *The Geology of Borneo Island* (Tate, 2001) published by the Geological Society of Malaysia. The opening ceremony was graced by Prof. Dr. Joy J. Pereira, President of Geological Society of Malaysia and Mr. Liau Boon Leong, Sabah Appraisal Manager representing Mr. Hans Schwing, Vice President, Southeast Asia, Exploration and New Ventures, Murphy Oil Corporation that had co-sponsored the publication of the book on Peninsular Malaysia.

Five scientific sessions of oral presentation and two postal sessions were held over the two days. Fifty over participants from Malaysia, Japan, Philippines, Iran, Iraq, Korea, Thailand, Russia, Mongolia, India, Bangladesh, Poland, Australia, Myanmar, UK and China participated in the symposium and 20 participants in the post-symposium excursion. Thirty eight oral and 12 posters on the theme of IGCP 516, Geological Anatomy of East and South Asia was presented at the symposium held at the Department of Geology, University of Malaya. Many fruitful discussions followed most of the presentations that covered a broad range of topics from palaeontology and stratigraphy to geochemistry to tectonics, mineral deposits and petrogenesis. A business meeting was held after lunch on the second day of the symposium chaired by Prof. Ken-ichiro Hisada. It was decided to follow-up IGCP 516 with a successor project that would focus on geology around the Tethys with a proposal to be drafted under the leadership of Prof. Jin Xiaochi of China. Prof. Azman Abdul Ghani, the co-chairman of the Organizing Committee, declared the symposium closed after thanking everyone for their participation and the Organizing Committee for their hard work to make the symposium a great success despite there being no financial allocation for this sixth meeting in the series. The proceedings of this symposium with 40 abstracts, extended abstracts and short full papers were published as a book by the Faculty of Science, University of Malaya (ISBN 978-983-44296-9-0).

The post symposium field trip led by C.P. Lee, G.H. Teh, T.F. Ng and Azman A. Ghani took them on a west to east transect across Peninsular Malaysia from Kuala Lumpur to Kuantan crossing the SIBUMASU terrane on the Western Belt to the Main Range Granite to the Bentong-Raub Suture and Central Belt to the Indochina Terrane of the Eastern Belt. Outcrops visited during the field trip included the Silurian Kuala Lumpur Limestone at Batu Caves, the Main Range Granite and associated volcanics at Genting Sempah, Bentong-Raub Suture melange and cherts at Cinta Manis, Triassic marine *Myophoria-Costatoria* bivalve beds at Kuala Lipis, a visit to the Penjom Gold Mine, volcanoclastic conglomerates of possible Triassic or Jurassic-Cretaceous age near Kota Gelanggi, Jerantut, Kampung Gajah Mati, Kampung Chengkenik, the famous Jengka-Pass unconformity with flat-lying Jurassic Cretaceous continental redbeds overlying steeply dipping Permian limestone-clastic sequence, eastern Belt granite and dolerite dykes at Teluk Cempedak in Kuantan and Triassic proximal turbidites near Maran. The field Trip ended back in Kuala Lumpur on the evening of 14 November 2010.

C.P. Lee,  
Department of Geology,  
University of Malaya,  
50603 Kuala Lumpur Malaysia



# 6th International Symposium of IGCP516



## UPCOMING EVENTS

March 2-3, 2011: Managing Complex Projects for Oil & Gas Professionals, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 7-8, 2011: Petroleum Geology Conference & Exhibition 2011, Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia. Contact: Tel: 603-79577036; Fax: 603 79563900; email: geologicalsociety@gmail.com; website: www.pgcem.com.

March 8-10, 2011: Technical Report Writing and Presentation Skills for Engineers and Technical Professionals, Jakarta, Indonesia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 9-11, 2011: Offshore Convention, Vietnam. Contact: Roger Shen, Conference Director, Tel: 86 21 5108 6710 206; email: roger.shen@neoventurecorp.com

March 16-18, 2011: Petroleum Risk Analysis & Portfolio Management, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 21-23, 2011: E & P Business Simulation, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 21-25, 2011: Deepwater Engineering with Aberdeen Drilling Schools International, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 28-29, 2011: Drilling Essentials for New Engineers and Non-Technical Professionals in Oil & Gas, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

March 21-April 1, 2011: Exploration and Production Process Basics: Understanding the Petroleum Industry Value Cycle, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

March 28-April 1, 2011: High Pressure High Temperature Engineering with Aberdeen Drilling Schools International, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 1-3, 2011: Technical Report Writing and Presentation Skills for Engineers and Technical Professionals, Miri, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 3-8, 2011: Subduction zone dynamics from the surface to the lower mantle, Vienna, Austria. Contact: Susanne.buiter@ngu.no; website: http://meetingorganizer.copernicus.org/egu2011/session/6973

April 4-6, 2011: LNG Fundamentals with Mike Williams and Richard Harrison, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 4-8, 2011: Basic Geophysics, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

April 11-13, 2011: Introduction to Offshore Drilling Installations, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 11-15, 2011: Prospect and Play Assessment, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

April 11-15, 2011: AVO, Inversion, and Attributes: Principles and Applications, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

April 12-14, 2011: Geopolitical Risk in Oil & Gas, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 18-22, 2011: Operations Geology with Fugro Robertson, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 25-29, 2011: Sandstone Reservoirs, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

April 26-28, 2011: Advanced Turnaround, Shutdown and Outage Management with Tom Lenahan, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

April 26-28, 2011: Well Integrity Management, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

May 2-6, 2011: Petroleum Geostatistics – Integrating Data for Reservoir Modelling and Simulation, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com

May 2-6, 2011: Analysis of Structural Traps in Extensional Settings, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

May 2-6, 2011: Foundations of Petrophysics, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com



May 6-10, 2011: Mapping Subsurface Structures, London, UK, Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

May 16-20, 2011: Petroleum Systems Modelling for Exploration Risk Assessments, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com

May 17-21, 2011: Basin Analysis with Fugro Robertson, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

May, 23-26, 2011: The interrelations between deformation and metamorphism, Granada, Spain. Contact: Domingo Aerden (University of Granada): aerdena.gr.es

May 23-27, 2011: Sequence Stratigraphy: An Applied Workshop, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

May 23-27, 2011: Image Log Interpretation, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

May 24-26, 2011: Trouble Free High Angle, Extended Reach Drilling & Complex Wells, Kuala Lumpur. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

May 30-31, 2011: Introduction to Exploration and Production for New Engineers and Non-Technical Professionals, Singapore. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

May 30-Jun 3, 2011: Introduction to Petrophysics – Log Analysis, LWD & Wireline, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

June 6-10, 2011: Geochemical Techniques for Solving Reservoir Management and Field development Problems, Houston, USA. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

June 6-10, 2011: Fundamentals of Petroleum Geology, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com

June 11-12, 2011: National Geological Conference 2011, Johor Baru, Malaysia. Contact: Geological Society of Malaysia, Tel: 603 79577037; Fax: 603 79563900; email: geologicalsociety@gmail.com

June 13-17, 2011: Operations Geology, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

June 20-24, 2011: Surface Production Operations, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

June 20-26, 2011: Deep-water Turbidite Depositional Systems and Reservoirs, Nice, France. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

June 27-29, 2011: Upstream Petroleum Economics and Risk Analysis with Fugro Robertson, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

June 30-Jul 1, 2011: Economic Aspects of Production Sharing Contracts with Fugro Robertson, Kuala Lumpur, Malaysia. Contact: Caroline at Tel: +65 6741 9749; email: caroline@asiaedge.net

July 4-8, 2011: Development Geology, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

July 4-8, 2011: Carbonate Geology for Oil and Gas Exploration & Development, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com

July 10-15, 2011: 17th European Symposium on Organic Chemistry (ESOC2011), Crete, Greece. Contact: Michael Orfanopoulos, email: info@esoc2011.com; website: www.esoc2011.com

July 11-15, 2011: Clastic Sedimentology for Exploration and Development, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: training@hoteng.com

July 11-15, 2011: Basic Petroleum Engineering Practices, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

July 25-29, 2011: Basic Petroleum Geology, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

July 25-29, 2011: Naturally Fractured Reservoirs: Geologic and Engineering Analysis, London, UK. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

July 25-29, 2011: Introduction to Seismic Stratigraphy: A Basin Scale regional Exploration Workshop, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

August 1-5, 2011: Advanced Seismic Stratigraphy: A Sequence – Wavelet Analysis Exploration – Exploitation Workshop, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: ap-enquiries@petroskills.com

August 5-15, 1012: 34th International Geological Congress, Brisbane, Australia. Contact: Dr. Ian Lambert, Geoscience Australia. Tel: +61 2 62499556; Fax: +61 2 62499983; email: [ian.lambert@ga.gov.au](mailto:ian.lambert@ga.gov.au); website: [www.ga.gov.au/igc2012](http://www.ga.gov.au/igc2012)

August 8-12, 2011: Basin Analysis Workshop: An Integrated Approach, Singapore. Contact: Tel: 603 2168 4751; email: [ap-enquiries@petroskills.com](mailto:ap-enquiries@petroskills.com)

September 5-7, 2011: Volcaniclastic Rocs – Classification, Properties, Genesis and Depositional Settings, Vienna, Austria. Contact: HOT Engineering GmbH, Parkstrasse 6, A-8700 Leoben, Austria; Tel: +43 3842 43053-33; Fax: +43 3842 43053-1; email: [training@hoteng.com](mailto:training@hoteng.com)

September 12-16, 2011: Carbonate Reservoirs, London, UK. Contact: Tel: 603 2168 4751; email: [ap-enquiries@petroskills.com](mailto:ap-enquiries@petroskills.com)

September 12-16, 2011: Seismic Interpretation, Kuala Lumpur, Malaysia. Contact: Tel: 603 2168 4751; email: [ap-enquiries@petroskills.com](mailto:ap-enquiries@petroskills.com)

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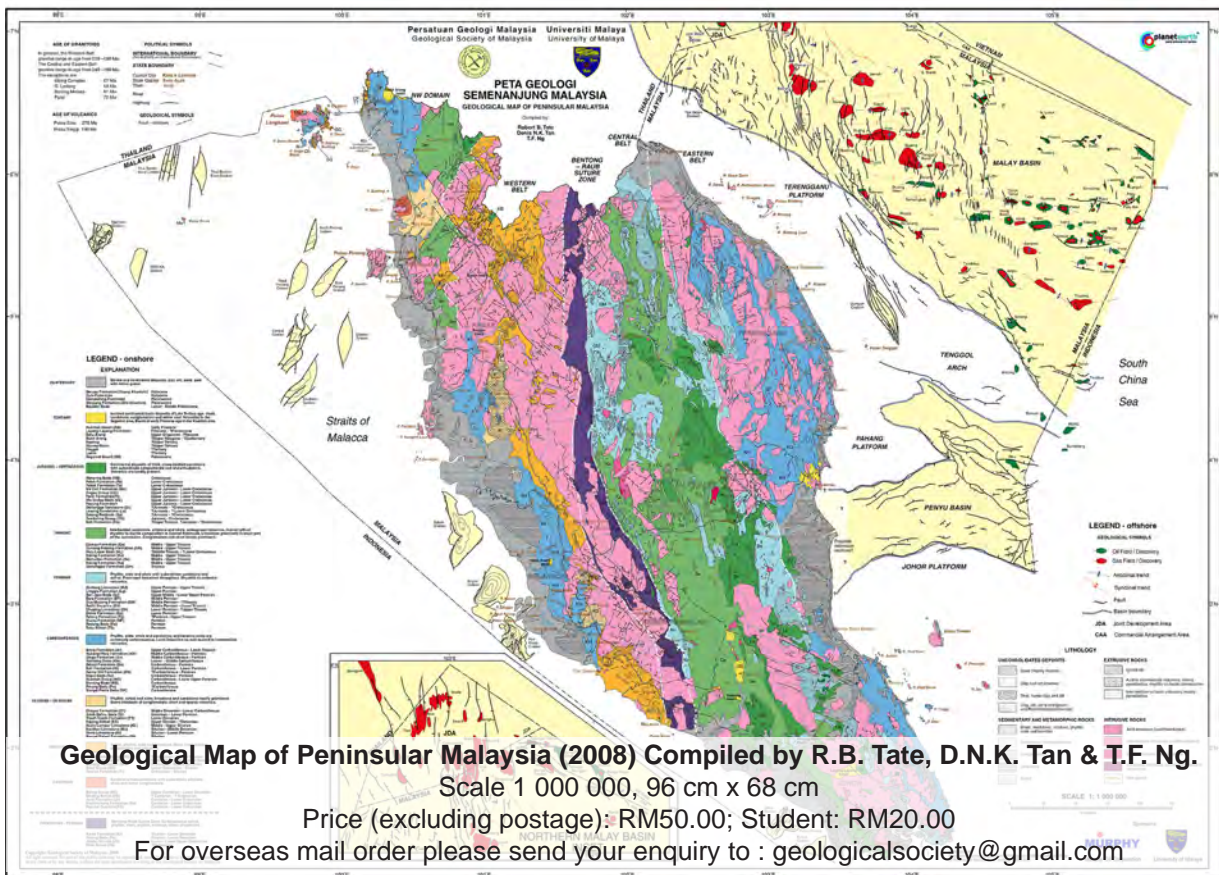


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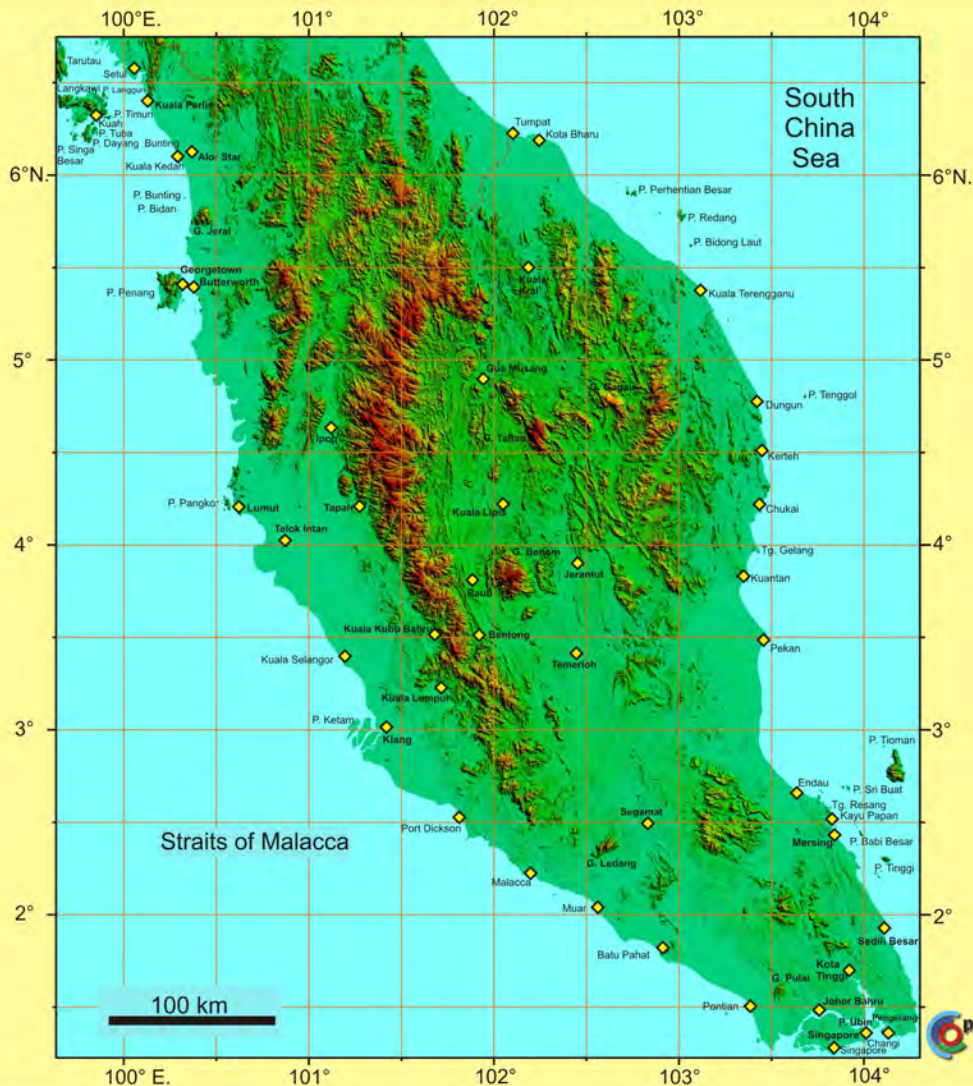
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**WARTA GEOLOGI** PERSATUAN GEOLOGI MALAYSIA

Newsletter of the Geological Society of Malaysia

Jilid 36, No. 4 • Volume 36, No. 4 • October–December 2010

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