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WARTA GEOLOGI

PERSATUAN GEOLOGI MALAYSIA

*Newsletter
of the*

Geological Society of Malaysia



'Petrified Wave' - Coastal outcrop of conglomerate sandstone with cross bedding, Beliat Formation

Location : Tanjung Kubang, Labuan

By Dr Ng Tham Fatt

3rd place in the 2005 GSM Photo Competition

Jilid /Volume 32, No 5. September - October 2006



PERSATUAN GEOLOGI MALAYSIA (GEOLOGICAL SOCIETY OF MALAYSIA)

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Prof Charles Hutchison

Robert Tate

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CATATAN GEOLOGI (Geological Notes)

GUNUNG KINABALU: SOUTHEAST ASIA'S ROOF RISING

Professor Emeritus H.D. Tjia
Lestari, Universiti Kebangsaan Malaysia,
43600 Bangi, Selangor D.E. Malaysia

About 10 years ago, Low's Peak, the summit of the Kinabalu pluton, was determined to be 4095.5 metre high, some 8 metres short of its previously accepted elevation. This new official height still maintains Mount Kinabalu summit as the highest topography in western Southeast Asia.

The pluton is coarse-grained and porphyritic adamellite (Collenette 1958; Jacobson 1970) whose radiometric ages centre around an emplacement at 9 million years. Swauger et al. (2000) published apatite and fission-track dates that suggest intrusion dates between 10 to 13.7 million years. Vogt and Flower (1989; in Swauger et al. 2000) estimated depth of emplacement of hornblend-quartz monzonite, biotite-quartz monzodiorite and mafic inclusions (all, I presume, to represent the Kinabalu pluton) to have been in the range of 3 to 10 km. A less sophisticated approach to estimate emplacement depth is to consider the general Kinabalu pluton as product of a felsic silicate melt. Such felsic mixture usually begins to solidify at about 550°C that for a normal geothermic gradient environment translates into a depth range of 13 to 18 km (Balk 1948; Holmes, 1965). It is conceivable that with the high heat of the intruding mixture, crystallisation only occurs at higher and cooler levels in the crust. For this note I assume that depth to be 4 to 6 km (compare with Swauger's et al. depth range), or one third of the theoretical value. This also corresponds to a minimum overburden thickness that has since been removed over the Kinabalu massif. Combined with the present elevation of its peak the vertical distance travelled by the pluton had been at an average annual rate of around a millimetre. Wilford (1968) indicated a similar value when explaining the elevations of early Pleistocene planation surfaces in the Crocker Range of western Sabah.

Figure 1 shows the south face of the Kinabalu summit area viewed northward from the ascent trail. The two prominent rocky crags are known as Donkey's Ears, and the small (due to distance) triangular prominence on the left is Kinabalu South. These towering crags have rugged outlines as they stood out above the ice blanket that once covered the summit area from approximately 4000 m elevation to Panar Laban at 3400 m. The moving ice smoothed the bedrock and left a host of large to smaller glaciated features, while a portion of debris were deposited as till at Paka Cave's elevation less than 200 metres below Panar Laban. Koopmans and Stauffer (1968) first documented the glacial features of Mount Kinabalu. Since then, details were added by other field workers. The glacial features we see now are most likely products of processes during the Last Glacial. The peak glaciation was between 22 k and 18 k years, while worldwide glaciers retreated significantly after 10 k that also marks the beginning of the Holocene. Exfoliation slabs up to 3 metres in thickness are also shown in the photograph. However, the general smoothness of the summit topography has been preserved. In places these young smooth surfaces are faulted. Left of centre is a series of step faults striking easterly and dipping 75 degrees to vertical (measured on their extension across the ascent trail). Individual fault surfaces may reach 10 metres high (estimated using binoculars in the field at three separate climbs in a 9-year period, the latest being in 1994. Striations with other fault-plane markings on accessible fractures with similar attitudes indicate a

GUNUNG KINABALU: SOUTHEAST ASIA'S ROOF RISING

right-lateral slip component. The E-W faults are parallel to aplite veins and dykes in this part of the pluton. This indicates that the E-W fractures represent a structural grain in the massif. To the left (= west) the step faults abut against a NNE striking normal fault surface, probably over ~50 metres high. Its relative smoothness suggests effect of glaciation. Toward the east, the step faults are also cut by similarly trending fractures (photo centre).

These post-glacial fault movements in the Kinabalu pluton strongly suggest that the massif is still rising, and that normal faulting represents attempts to restore isostatic balance that had been disturbed by the uplift.

Acknowledgement:

Certain valid comments by two reviewers (C.S. Hutchison and R.B. Tate) were used as guide to revise the note into its present form.

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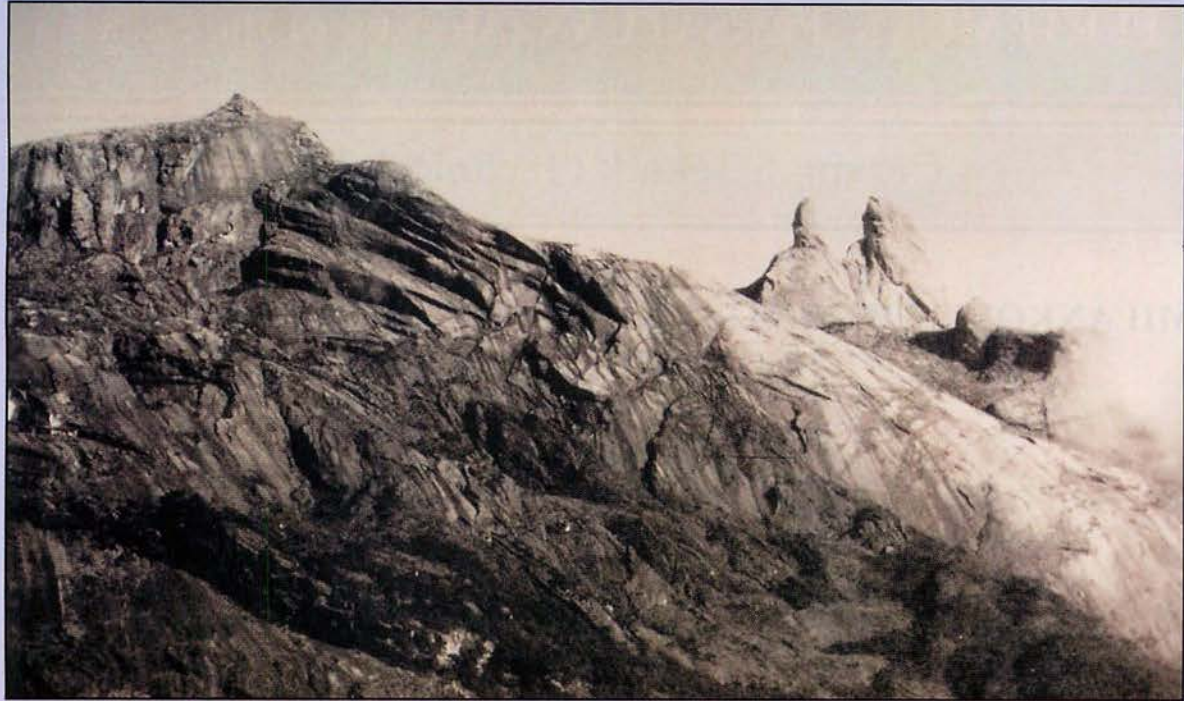
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{ Manuscripts received on 26 Octobr 2006 }

GUNUNG KINABALU: SOUTHEAST ASIA'S ROOF RISING



West

East

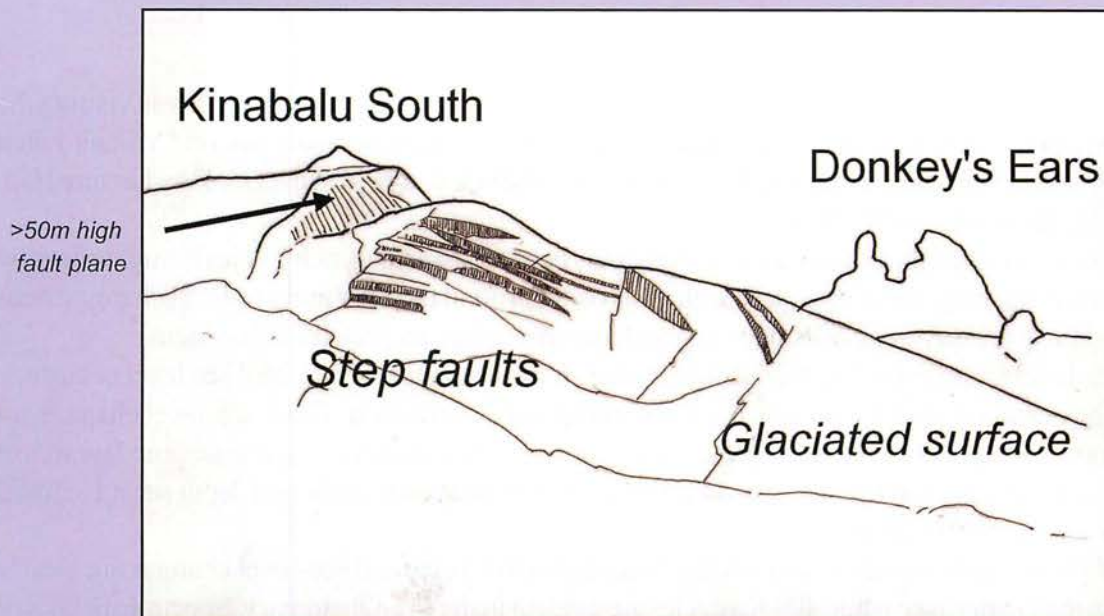


Figure 1.

The south slope of Gunung Kinabalu's summit area. The triangular peak on the left (west) is Kinabalu South; the two prominent rocky towers are the Donkey's Ears. Post-glacial deformation is expressed by the series of East-West striking step faults that have individual scarps reaching over 10 metres. The fault scarp below Kinabalu South strikes NNE and is over 50 m high. Photograph: H.D. Tjia 1985.

PERTEMUAN PERSATUAN (Meeting of the Society)

Ceramah Teknik (Technical Talk)

MILANKOVITCH CONTROL OF EUSTATIC SEA LEVELS IN THE GEOLOGICAL RECORD

13 April 2006

Geology Department

University of Malaya

(in collaboration with the Dept of Geology, University of Malaya)

PROF. DR ANDREW SCOTT GALE

University of Greenwich

United Kingdom

Report

Professor Dr. Andrew Scott Gale from the University of Greenwich, UK who was visiting the Department of Geology, University Malaya as external examiner, presented a talk on "Milankovitch Control of Eustatic Sea levels in the Geological Record". The talk was held at the Geology Lecture Hall, University Malaya on 13 April 2006.

He demonstrated that a clear relationship exists between Milankovitch Cycles brought about by the elliptical orbital motions of the tilted earth as it rotates around the Sun, and sea-level changes. Sea-levels and climate are driven by orbital forcing and form part of an integrated Earth system.

Relative sea-level is composed of the subsidence/ uplift history of the area, global sea level or eustasy controlled by ocean ridge volume and ice volume and geoid deformation. These sea-level changes are detected from $\delta^{18}\text{O}$ variations recorded in climatic cycles in Indian Ocean cores, Pleistocene Terraces in Huon Peninsula, Papua New Guinea and $\delta^{13}\text{C}$ variations in Cretaceous chalk and depth sensitive fossil communities preserved in the rocks.

Relationships between 40 and 100 Ka Milankovitch Cycles and sea-level changes are clearly identified in the Quaternary while 400 Ka cycles are evident in the Pre-Quaternary. Spectral analysis of long time series of $\delta^{13}\text{C}$ data demonstrates the presence of long eccentricity cycles at 400 Kyr and 2.4 Myr. Identification of these cycles provides a template for developing new Cretaceous timescales.

Prof Dr Lee Chai Peng

MILANKOVITCH CONTROL OF EUSTATIC SEA LEVELS IN THE GEOLOGICAL RECORD - PROF DR ANDREW SCOTT GALE



Prof Andrew Gale presenting his talk



Part of the audience at the talk



Prof Dr Lee, President of GSM, presenting a momento to Prof Andrew Gale

Ceramah Teknik (Technical Talk)

SUNDALAND IS UNUSUAL: WHY YOU SHOULD BE EXCITED TO LIVE THERE!

11 September 2006
Geology Department
University of Malaya
 (in collaboration with the Dept of Geology, University of Malaya)

Prof Dr Robert Hall
SE Asia Research Group, Department of Geology,
Royal Holloway University of London
email: r.hall@gl.rhul.ac.uk

Report

Dr. Robert Hall and his graduate students have long been involved with research into the regional tectonics of Southeast Asia. They target such issues as the rate of uplift of Mount Kinabalu. Sundaland (the area of continental crust that underlies much of South East Asia and its sea basins) is often described as a “platform”, or a “shield”, implying that it has been stable for a long period of time. Dr. Hall’s talk was aimed at dispelling this widely held notion - according to him, Sundaland is more akin to the Basin and Range Province of the Southwestern United States than it is to, say, the South African or Canadian continental shields. In addition, according to Dr. Hall, undue emphasis has been placed, by most researchers, on the influence on Southeast Asian tectonics of the collision between the India subcontinent and Asia. Instead, he argued, the main influence on Southeast Asian tectonics has been the huge amount of subduction that has taken place. Vast tracts of oceanic crust have, over the years, disappeared under Sundaland’s eastern and southern margins.

The talk was well attended. Aside from the usual stalwarts, in attendance were several of Dr. Hall’s graduate students, and quite a few geoscientists from the oil industry (due to the efforts of Chris Howells, who manages the KL Explorationists’ e-mail list). The post-talk dinner was also unusually well attended, occupying several tables at Sri Paandi’s at Jalan Bukit.

Biography

Professor Dr Robert Hall is the Director of SE Asia Research Group and also the Degree Programme Co-ordinator MSci Environmental Geology. His key research topics are SE Asia and SW Pacific Cenozoic Tectonics, Island Arc Evolution Biogeography of SE Asia, Tectonics, climate and tropical sedimentation. He has made many publications over the years on geology and is currently teaching 1st, 2nd, 3rd and 4th year courses in Structural Geology, Environmental Geology, GIS and fieldwork.

He is on the committees and editorial boards of *Tectonophysics* as Editor, *Journal of the Virtual Explorer* and the external evaluator Geology programme at the School of Science and Technology at the University of Malaysia, Sabah. He was also a visiting professor at the University of Hong Kong - Kan Tong - Royal Society in early 2004.

Dr Nur Iskandar Taib

SUNDALAND IS UNUSUAL: WHY YOU SHOULD BE EXCITED TO LIVE THERE!

Abstract

The continental core of Sundaland was largely assembled by the beginning of the Mesozoic, and formed an exposed landmass during Pleistocene lowstands. Because the region includes extensive shallow seas, and is not significantly elevated, it is often assumed to have been stable for a long period. Sometimes it is described a craton. It is not a craton and this stability is a myth.

Sundaland is today surrounded by subduction and collision zones, and merges with the India–Asia collision zone. Cenozoic deformation is recorded in the numerous deep sedimentary basins alongside elevated highlands. Borneo occupies a central position and has a complex history of elevation, deformation and sedimentation often suggested to be linked to India–Asia collision. Some reconstructions interpret a SE Asian block with Borneo at its centre which has been rotated clockwise and displaced southwards along major strike-slip faults due to the indentation of Asia by India.

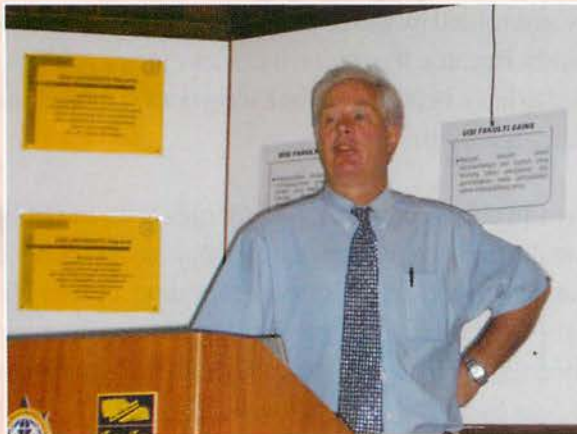
Tectonic influences on the region during the Cenozoic include India–Asia collision, Australia–SE Asia collision, collisions of the Pacific plate/Philippine Sea plate with the Asian margins, and subduction processes. Collisions, backarc extension, subduction rollback, strike-slip faulting, mantle plume activity, and differential crust–lithosphere stretching have been proposed as possible basin-forming mechanisms. In scale, crustal character, heat flow and mantle character the region resembles the Basin and Range province or the East African Rift, but is quite unlike them in tectonic setting.

The geological history of the region is not consistent simply with the movement of large blocks extruded from Asia. Large clockwise rotations and displacements predicted by the indenter model are incompatible with palaeomagnetic evidence and there is no evidence that the major strike-slip faults of the Asian mainland extend into Borneo. Seismic tomography shows a profound change in mantle structure beneath Sundaland. Deep high velocity anomalies interpreted as subducted lithosphere mark the end of Tethys and a different subduction system in the West Pacific. Very great thicknesses of Cenozoic sediments, particularly in Borneo and circum-Borneo basins, were mainly locally derived and not supplied from Asia following India collision. Modern and Late Cenozoic sediment yields are exceptionally high despite a relatively small land area. Long-term high rates of sediment supply imply significant deformation and elevation.

India-Asia collision has not been the major influence on the Cenozoic geological record. Subduction has been the most important driving force; it appears to lead to a different mantle beneath the upper plate associated with a lithosphere which is not like that of older stable continents and their margins. As a result of subduction there is a high heatflow across a region well beyond the immediate areas of the volcanic arcs. There is probably a thin lithosphere and generally a weak crust and lithosphere beneath much of SE Asia, as identified in many other subduction zone backarcs. Deformation in response to changing forces at the plate edges explains the maintenance of relief and hence sediment supply over long time periods.

This is an exciting region which deserves to be better known outside SE Asia. Even geologists who know the region well tend to be overawed by the impact on India on Asia, and/or interpret the region in the light of models derived from elsewhere which may not be appropriate. Sundaland is unusual, interesting and still inadequately understood. The next generation of SE Asian geologists still have a lot to do

SUNDALAND IS UNUSUAL: WHY YOU SHOULD BE EXCITED TO LIVE THERE!



Prof Dr Robert Hall at the talk on Sundaland



Prof Dr Robert Hall with Prof Denis Tan of University of Malaya



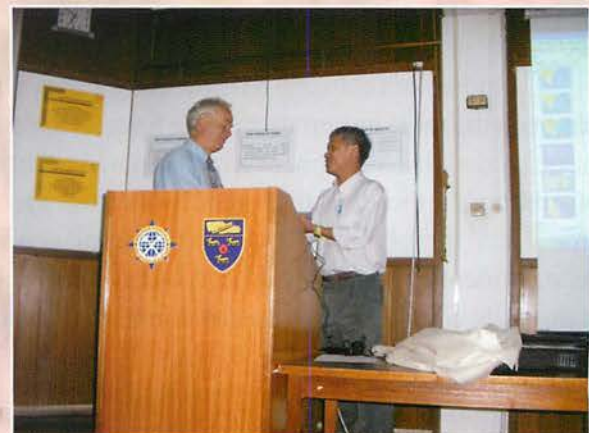
Part of the audience at the talk



Part of the audience at the talk by Prof Dr Robert Hall



Part of the audience at the talk by Prof Dr Robert Hall



The President of GSM presenting Prof Dr Robert Hall a memento at the end of his talk

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Ceramah Teknik (Technical Talk)

MALAM TUNNELLING

Geotechnical Aspects of the SMART Tunnels.

Simon Tan, S.M. (SSP Geotechnics)

Grouting Works for the SMART Tunnels.

Yee, Y.W. (Keller)

Tunnelling Activities in Malaysia.

Assoc Prof Tan, B.K. (UKM)

20 September 2006

Geology Department

University of Malaya

(in collaboration with the Dept of Geology, University of Malaya)

Report

“Malam Tunneling” featured 3 speakers who dealt with various tunneling projects in Malaysia.

Ir. Simon Tan spoke on the geotechnical aspects of the SMART tunnel in K.L., dealing mainly with excavation of the limestone, and stabilization or support measures for the rock slopes in the shaft excavation.

Ir. Yee dealt with various grouting techniques employed in the grouting of the cavities, solution channels and fractures in the limestone bedrock of the SMART tunnel, as well as grouting of the soft soils overlying the limestone.

Mr. Tan gave an over-view of tunneling activities in Malaysia in the past decade, discussing tunneling methods, support systems, engineering geologic problems, etc.

Assoc Prof Tan Boon Kong,

Chairman, Working Group on Engineering Geology & Hydrogeology, GSM.

MALAM TUNNELLING



Tea time at the Malam Tunnelling Talk



Assoc Prof Tan Boon Kong delivering his talk on tunnelling activities



Mr Simon Tan delivering his talk on Geotechnical Aspects of the SMART Tunnels.



Mr. Yee YW delivering his talk on Grouting Works for the SMART Tunnels.



Assoc Prof Tan presenting a souvenir to Yee YW



Part of the audience at the Malam Tunnelling Talk

Ceramah Teknik (Technical Talk)

Intelligent Design Theory in Discussions on Origins

22 September 2006
 Geology Department
 University of Malaya
 (in collaboration with the Dept of Geology, University of Malaya)

Emeritus Prof Dr Robert C Newman

e-mail: rnewman@erols.com

Report

The talk on “Intelligent Design Theory in Discussions on Origins” by Emeritus Professor Dr. R.C. Newman was held at the Geology Lecture Hall at the University of Malaya on 22 September 2006. Dr. Newman began by defining intelligent design as a term used to describe a movement in the evolution controversy which maintains that design in nature implies a mind that produced this result rather than being a mere appearance of design produced by selection effects in a mindless universe. Evolution came to be seen as a replacement for a Designer in biology after Darwin (1859) as mutation and natural selection are seen to be the cause of all apparent ‘design’.

Design in inanimate nature had been discussed a number of times before Darwin and also after Darwin. ‘Fine-tuning’ in the laws of physics and the Earth’s environment were discussed in several books. Meanwhile, in the US, a pair of court decisions (1982, 1985) had struck down state laws which required teaching of creation alongside evolution. The US Supreme Court upheld these decisions in 1987 but a number of observers felt that these decisions were flawed because they used a very narrow definition for creation (creation is religious but evolution is not) and also for science (only naturalistic explanations are allowed). The really crucial problem is this second one as it rules out all versions of creation without considering the evidence. This led rather quickly to the Intelligent Design Movement usually marked as beginning with the publication of *Darwin on Trial* (1991) by Phillip Johnson, Professor of Law at the University of California at Berkeley, who was aroused by the problematic nature of legal argumentation. This was followed by the publication of *Darwin’s Black Box* (1996) by Michael J. Behe who raised the problem of irreducible complexity in biological systems such as the rotary flagellum of *E. coli*, blood clotting, intra-cell transport, the immune system and vision that do not look like they could be produced by mutation and natural selection based on interdependent parts that need to work simultaneously or not at all in all those examples. A striking example of irreducible complexity that spans the universe from large to small is described in the book, *Nature’s Destiny*, by microbiologist Michael Denton. Physician Frederic Nelson challenged the stubborn physical limits to life and its diversity arising by purely natural processes by his calculations in his book *Evolution Dissected*. Walter L. Starkey, retired professor of mechanical engineering at Ohio State University and a frequent expert witness in lawsuits related to causes of mechanical failure, analyzes the origin of animals from a mechanical engineering perspective and concluded that complex mechanical and chemical systems are present in animals from the beginning of the Cambrian Explosion.

Intelligent Design Theory in Discussions on Origins

Dr. Newman introduced a few more books on the subject to us including *Show Me God* by science writer Fred Heeren and *Computer Viruses, Artificial Life and Evolution* by computer scientist Mark Ludwig who sponsored the First International Virus Writing Contest to design the smallest virus having a minimal functionality. The winning entry was 101 bytes in length. His conclusion was if every elementary particle in the universe were a PC generating a 101-byte file every 10^{-26} second from the Big Bang until now, the chance they would have produced this one is less than one chance in 10^{109} . The last book he introduced to us was *Mere Creation*, a collection of papers presented at Biola University in 1996, edited by philosopher-mathematician William Dembski. Authors are scholars and scientists who reject naturalism as an adequate framework for doing science and identify with an intelligent design paradigm.

Dr. Newman concluded his talk by challenging us to consider that Intelligent Design is something worth thinking about.

Biography

Dr Newman received his early education at the Duke University, United States where he obtained his B.Sc *summa cum laude* in Physics. He obtained his doctorate (PhD) in Astrophysics from the Cornell University, New York. Throughout his academic and professional career he has received numerous awards and honors among which are the Woodrow Wilson Honorary Fellow, Andrew Dickson White Honorary Fellow from Cornell University, Who's Who in Religion and Who's Who in Theology and Science. He has over 100 publications to his name.

Prof Dr Lee Chai Peng

Ceramah Teknik (Technical Talk)

PETROLEUM SYSTEMS IN RIFT BASINS - A COLLECTIVE APPROACH IN SOUTH EAST ASIAN BASINS

19 October 2006

Geology Department

University of Malaya

(in collaboration with the Dept of Geology, University of Malaya)

Professor Dr Harry Doust

Professor of Regional and Petroleum Geology

Vrije University of Amsterdam

The Netherlands

Abstracts

This talk reports some of the main conclusions reached in a regional review of the Tertiary basins of Southeast Asia carried out by Shell in recent years. Four distinctive types of petroleum systems have been recognized, correlating with the four main stages of basin evolution (early to late synrift and early to late postrift) and widely developed in the basins. These petroleum systems are characterized by interbedded environmentally controlled source, reservoir and seal lithofacies that, in combination with structural trap formation, determine the hydrocarbon prospectivity. Variations in the tectonostratigraphic evolution consequent on differences in, for instance, basin palaeogeographic position and proximity to late Tertiary collision events, are reflected in differences in the representation of the four petroleum system types. In turn this is reflected in the overall hydrocarbon volumes found, the average field sizes and the mix of oil and gas. The recognition of analogous petroleum systems and reservoir lithofacies play types in well-explored basins can facilitate predictions of hydrocarbon prospectivity in less well-known rift / postrift basins and plays, and thereby contribute to future exploration evaluation in these provinces.

Biography

Harry Doust graduated in 1968 from Imperial College in London with a PhD on the geology of outcropping Miocene sediments in the Libyan Desert. He joined Shell International directly thereafter and over a period of more than 30 years he has worked on many aspects of petroleum exploration. He has lived in the Netherlands, Turkey, Oman, Malaysia and Nigeria and has carried out evaluation for new ventures in many other parts of the world. His last jobs with Shell were Head of Global Geological Studies, Global geological adviser and exploration process consultant. He retired from Shell and took up the position of special professor of Regional and Petroleum Geology at the Vrije (Free) University of Amsterdam in the Netherland, where his interests are directed at recognition of patterns in the geologic context of petroleum systems and plays. He is a member of several professional bodies, including AAPG, Geological Society of London and the EAGE.

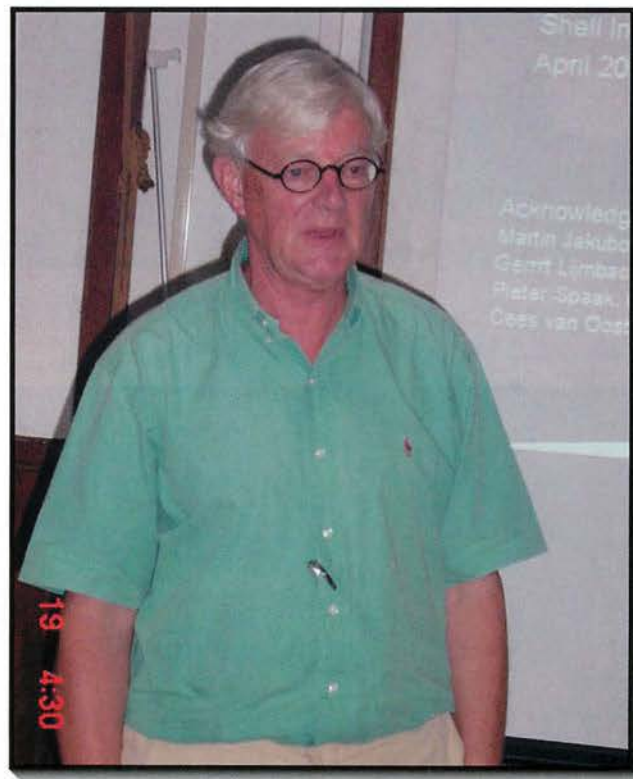
PETROLEUM SYSTEMS IN RIFT BASINS - A COLLECTIVE APPROACH IN SOUTH EAST ASIAN BASINS

Report

We were fortunate to have with us Prof. Harry Doust, Professor of Regional and Petroleum Geology, who teaches at the Vrije University of Amsterdam. The study of the development and evolution of sedimentary basins is one of the cornerstones of modern Petroleum Geology, and Prof. Doust is an acknowledged expert on the subject. Before Prof. Doust joined academia, he had spent several years with Shell, exploring for oil in this region, and is continuing to conduct research on South East Asian sedimentary basins. This talk was the culmination of three days spent at the University of Malaya, most of which was spent giving lectures to the MSc candidates participating in the petroleum Geoscience course.

The talk was well-attended by GSM members, University staff and students. As we had help to promote the talk through the KL Explorationists e-mail list through the kind services of the coordinator, Chris Howells, we also had quite a few attendees from the oil exploration community in KL. Since this talk took place during Ramadan, we did not have the usual pre-talk tea.

Dr Nur Iskandar Taib



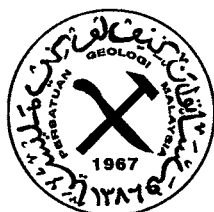
Professor Harry Doust

GSM-IEM *Oktoberforum* 2006:

**“ENGINEERING GEOLOGY &
GEOTECHNICAL ENGINEERING”**

Tuesday, 31st October 2006

**Department of Geology
University of Malaya
Kuala Lumpur**



Jointly organised by:

**The Working Group on
Engineering Geology & Hydrogeology
Geological Society of Malaysia**

&

**The Geotechnical Engineering Technical Division
The Institution of Engineers, Malaysia**

OKTOBERFORUM 2006 – PROGRAMME

- 8.00– 8.45am : Registration
- 8.45– 9.00am : Opening Remarks by Tan, B.K.,
Organising Chairman
(Chairman, Working Group on Engineering Geology & Hydrogeology, GSM).

SESSION 1 – Chairman: Tan,B.K.

- 9.00– 9.30am : 1) Chen, C.S. (*SSP Geotechnics*)
The drained shear strength of soft clay.
- 9.30– 10.00am: 2) Lee, C.L. & Tan, S.M. (*SSP Geotechnics*)
Rock stabilization works in karstic limestone (A case history on KL Limestone excavation)

OKTOBERFORUM 2006 – PROGRAMME

10.00 – 10.30am: 3) Rodeano Roslee, Sanudin Tahir, S. Abd. Kadir S. Omang & Ismail Abd. Rahim (*UMS*)
Discontinuity survey and mode of rock slope failure along the Bundu Tuhan to Kundasang Highway, Sabah, Malaysia.

10.30 - 11.00 am: **COFFEE BREAK 1**

SESSION 2 – Chairman: Tan, Y.C.

11.00 – 11.30 am: 4) Y. Duraisamy, Bujang B.K. Huat, R. Muniandy & A.A. Aziz (*UPM*)
Effects of cement column on the compressibility of tropical peat soil.

11.30 – 12.00 am: 5) Kenny Yee (*Menard*).
Ground reinforcement – a unique case history.

12.00 – 12.30 am: 6) Tan, B.K. (*UKM*)
On boulders and boulder-problems in constructions.

12.30 – 2.00 pm: **LUNCH**

SESSION 3 – Chairman: Simon Tan, S.M.

2.00– 2.30 pm : 7) Mun, K.P. (*Tesonic*)
Special considerations in the interpretations of dynamic load test signals.

2.30– 3.00 pm : 8) H.K. Yandamuri & Yee, Y.W. (*Keller*)
Performance of a high reinforced soil wall supported on vibro stone columns.

3.00– 3.30 pm : 9) Ng, C.N. (*Subsurface Engineering*)
The role of geological mapping in geotechnical engineering.

3.30– 4.00 pm : **COFFEE BREAK 2**

SESSION 4 – Chairman: Yee, Y.W.

4.00– 4.30 pm : 10) Neoh, C.A. (*E-Geo Consultant*)
Soil Nailing – what can go wrong?

4.30– 5.00 pm : 11) Yee, T.S. (*Geo.Consult*)
Geotechnical engineering parameters from back-analyses of structural failures in earthworks – valid or not?

5.00 – 5.30 pm : 12) Chow, W.S., Yunus Abdul Razak & Zakaria Mohamad (*JMG*)
Landslide occurrence at Taman Harmonis, Gombak, Selangor

5.30– 5.45 pm : Closing Remarks by Yee, Y.W., Organising Co-Chairman.
(Chairman, Geotechnical Engineering Technical Division, IEM).

GSM-IEM *Oktoberforum* 2006
“Engineering Geology and Geotechnical Engineering”
31st Oct. 2006
Armada Hotel, Petaling Jaya.

Report

The GSM-IEM *Oktoberforum* 2006 on “Engineering Geology and Geotechnical Engineering” was jointly organised by the Working Group on Engineering Geology & Hydrogeology of the Geological Society of Malaysia (GSM) and the Geotechnical Engineering Technical Division of IEM. This forum was the 14th in the series of such forums organised by GSM/IEM, initiated by GSM since 1992.

This 14th forum was made very general in nature in order to encourage more paper contributions. It covered various topics (see programme attached) and was targeted as a compilation of local case histories on engineering geology and geotechnical engineering. A total of 12 papers were received and included in the proceedings volume of the forum – 5 by geologists and 7 by engineers.

Response to the forum was overwhelming, with ~200 participants. As a matter of fact, many later requests had to be turned away due to space constraints. Ample time was allocated for questions and discussions, and these were fully utilised, resulting in very lively and fruitful discussions after every presentation.

Footnote: Limited copies of the proceedings are available for sale at RM30. Please enquire at GSM secretariat.

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

GSM-IEM Oktoberforum 2006

Engineering Geology and Geotechnical Engineering



The Organising Chairman, Assoc Prof Tan Boon Kong giving his welcome speech



Anna registering participants at the forum



Robert Tate with Askury , who is the secretary of GSM



View of more than 200 participants at the forum



Chen CS of SSP Geotechnics was the first speaker



Assoc Prof Tan BK with Kenny Yee and Tan YC, who was the session Chairman

GSM-IEM *Oktoberforum* 2006

Engineering Geology and Geotechnical Engineering



Question from the floor by Askury



Part of the audience at the forum



The audience at the forum



Neoh CA, Yee TS, Yee YW (session chairman), Chow WS.



Ng CN, Mun KP, Yandamuri HK and Simon Tan



Closing remarks by Assoc Prof Tan Boon Kong

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Pertukaran Alamat (Change of Address)

1. Lau YinLeong, No19, Jln BU 7/8, Bandar Utama, 47800 Petaling Jaya
2. Wan Ismail Wan Yusof, Universiti Teknologi Petronas, Bandar Sri Iskandar, 31750 Tronoh
3. Ali Hj. Mohd. Shariff, 12, Jalan 14/3C, Taman Serdang Utama, 43300 Seri Kembangan
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5. S.S. Subramaniam, 1, Lorong 22/42A, 46300 Petaling Jaya

Pertambahan Baharu Perpustakaan (New Library Additions)

1. Petromin, September 2006
2. AAPG Explorer, September 2006
3. Episodes, vol. 29, no. 3, 2006
4. Proceedings of the Seventh and Eighth Symposia on collection building and natural history studies in Asia and the Pacific Rim edited by Yukimitsu Tomida, et al., 2006
5. Geological Bulletin of Turkey, vol. 47 (2), 2004; vol. 48 (1), 2005; & vol. 49 (1), 2006

Proceedings for Sale

1. Forum on groundwater, 1994 (3 copies)
2. Forum on environmental geology & geotechnics, 1995 (4 copies)
3. Dynamic stratigraphy & tectonics of Peninsular Malaysia, 3rd seminar – the Mesozoic of Peninsular Malaysia (2 copies)
4. GSM-IEM forum: the roles of engineering geology and geotechnical engineering in construction works: proceedings (10 copies)

HELP WANTED!

Dr. E. F. Bradford

Dr. Bradford worked for the Geological Survey in what was then called Malaya. His memoirs were on Gunung Jerai and the Kinta Valley. Bradford was born in 1917. His family in Germany is trying to trace his whereabouts should he still be alive. Any reader who has any knowledge of where he went upon leaving Malaya around 1963, is encouraged to send an e-mail to Dr Krefter at the following address:

Krefter@t-online.de

The reason for this request is that Bradford's sister, now living in Berlin, who is about 75 years old, has not heard from her brother since 1960.

BERITA-BERITA LAIN (Other News)

Editor's Note

Malaysian roads are notorious for its potholes which are a real danger to motorcyclists and it is noted that inspite of efforts done by the authorities to repair them all the time it is still a perenial recurring problem. In response to an article in the Star regarding the rise in road deaths due to potholes, our GSM President Prof Dr Living Lee Chai Peng wrote to the STAR explaining the main factors that contribute to potholes. We hope that the powers that be would take note and in future carried out proper maintenance instead of resorting to temporary solutions of patching here and there. The following article captioned '**Danger of potholes**' appeared in The Star, the most widely circulated English newspaper in Malaysia, under the Opinion N49 page on 4th November 2006.



As a geologist and a motorcyclist, I would like to comment on the letter, "Potholed streets adding to the rise in road deaths" in interactive@thestar (The Star, Oct 31).

It is true that potholes are a real danger to motorcyclists especially when they cannot be clearly seen at night or when covered with water.

Potholes are aplenty not just in rural but also urban roads. The two main factors contributing to pothole formation are loose gravel and water in depressions on the roads. The loose sand or gravel act as abrasive to gauge out and deepen or

enlarge the hole while pressure from passing vehicle tyres forces the water in between the tarred grains forcing them to come apart. The erosive power of pressurized water is often unrecognized but pressurized water and air has contributed to coastal erosion of stony cliffs to form caves and sea-stacks. The strength of pressurized air is visibly demonstrated in compressed air spear-guns used underwater.

The prevention of potholes from forming would entail keeping road-surfaces free of loose gravel and sand so that depressions are prevented from forming. A lot of these loose materials originate from piles of construction material or debris left beside the road and also naturally eroded soil from the unpaved road shoulders where they are higher than the road surfaces. Such road shoulders should either be paved with proper kerbers or the road surfaces must be raised higher than the road shoulders.

Many of the highly susceptible stretches of roads with potholes are located at junctions which may or may not be situated at the foot of a slope. They are often patched again and again when potholes keep recurring. Such places should have their tarred surfaces replaced by interlocking bricks or perhaps concrete that would eliminate the pressurized water factor.

Repeated patching of potholes is only a temporary solution. Keeping road surfaces free of loose gravel and ponding water will prevent them from forming. May we have safer roads for all especially the motorcyclists.

BERITA-BERITA LAIN (Other News)

CONOCOPHILLIPS PRESENT SCHOLARSHIPS TO GEOLOGY STUDENTS OF UNIVERSITY OF MALAYA

Monday 25 September 2006 was a red letter day for 4 lucky students in the Department of Geology, University of Malaya. Mr. Mark Wheeler, President of ConocoPhillips Malaysia, and Mr. Mark Boyd, Subsurface Lead, visited the Department of Geology and had discussions with Professor Dr Amru, representing the Dean of Science Faculty, and Professor Dr Wan Hasiah, Head of Geology Department, and other staff on areas for cooperation between ConocoPhillips and the University.

This was followed by a simple ceremony where Mr. Wheeler presented a cheque for RM25,000 to Professor Dr. Wan Hasiah to sponsor the 4 lucky students for the academic year 2006/2007. The 4 students are Ms Chow Mei Yee, who is pursuing a M.Sc. in Petroleum Geology, and Ms Husniyatul Adawiyah bt Abdul, Ms Nor Hazlijah bt Sukri, and Ms Fatihah bt Mohd Shahari, who are final-year B.Sc students in Geology. Mr. Wheeler wished the students success in their studies and invited the students to consider ConocoPhillips as a potential employer when they complete their studies. Professor Dr Amru thanked Mr. Wheeler and ConocoPhillips for the scholarships to the 4 students and hoped that this will mark the start of a long-term relation between ConocoPhillips and the University.



Mr Wheeler showing the ConocoPhillips brochure. L-R Prof Amru, Boyd, Wheeler; Prof Wan Hasiah, Chow Mei Yee, Nor Hazlijah, Fatihah, Husniyatul Adawiyah

CONOCOPHILLIPS PRESENT SCHOLARSHIPS TO GEOLOGY STUDENTS OF UNIVERSITY OF MALAYA



Mr Wheeler presenting the scholarship cheque to Professor Dr. Wan Hasiah.



Mr Wheeler presenting the scholarship letter to Fatihah witnessed by Chow and Nor Hazlijah



Mr Wheeler presenting the scholarship letter to Husniyatul



Mr Wheeler presenting the scholarship letter to Nor Hazlijah



Mr Wheeler presenting the scholarship letter to Chow

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Signature.....

BERITA-BERITA LAIN (Other News)

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- Bulletin 36** (Dec 1994). 186 p. Special issue on Petroleum Geology Vol. VIII. Edited by G.H. Teh. Price: RM50.00 .
- Bulletin 37** (Jul 1995). 506 p. Proceedings AAPG-GSM International Conference 1994. Southeast Asian Basins: Oil and Gas for the 21st Century. Edited by G.H. Teh. Price: RM60.00 .
- Bulletin 38** (Dec 1995). 190 p. A collection of papers presented at GSM Annual Geological Conference 1994 and others. Edited by G.H. Teh. Price: RM30.00 .
- Bulletin 39** (Jul 1996). 258 p. Papers from Petroleum Geology Conference 1995. Annual Geological Conference and others. Edited by G.H. Teh. Price: RM50.00
- Bulletin 40** (Jul 1997). 247 p. A collection of papers presented at GSM Annual Geological Conference 1996 and others. Edited by G.H. Teh. Price: RM30.00 .
- Bulletin 42** (Dec 1998). 268 p. Papers from Petroleum Geology Conference 1997, Seminar on Tertiary Basins of Peninsular Malaysia and others. Edited by G.H. Teh. Price: RM50.00 .
- Bulletin 43** (Dec 1999). 698 p. Papers from GEOSEA '98 (Ninth Regional Congress on Geology, Mineral and Energy Resources of Southeast Asia). Edited by G.H. Teh. Price: RM70.00 .
- Bulletin 44** (July 2000). 178 p. A collection of papers from Annual Geological Conference 1999, Western Belt & Paleozoic of Peninsular Malaysia Seminar 1999 & others. Edited by G.H. Teh. Price: RM30.00
- Bulletin 45** (May 2002). 375 p. Annual Geological Conference 2002. Conference Issue. Edited by G.H. Teh, Ismail Yusoff, Azman Abdul Ghani & T.F. Ng. Price: RM50.00 .
- Bulletin 46** (May 2003) 489 p. Annual Geological Conference 2003. Conference Issue. Edited by G.H. Teh, Alex Unya Ambun, Askury Abdul Kadir & T.F. Ng. Price: RM60.00 .
- Bulletin 47** (Dec 2003). 179 p. Papers from Petroleum Geology Conference 2002, Petroleum Geology Conference 1999 and others. Edited by G.H. Teh. Price: RM60.00 .
- Bulletin 48** (May 2004). 130 p. Annual Geological Conference 2004 Conference Issue. Edited by Lee Chai Peng, Mohd. Shafeea Leman, Joy J. Pereira & T.F. Ng. Price: RM30.00 .
- Bulletin 51** (2005). 199 p. Annual Geological Conference 2005 Conference Issue. Edited by Nur Iskandar Taib. Price: RM30.00
- Abstracts of papers** (1972). Regional Conference on the Geology of Southeast Asia. Kuala Lumpur, 1972. 64 p. 8 figs. 3 tables, many extended abstracts. Edited by N.S. Haile. Price: RM2.00 .
- Proceedings of the Workshop on Stratigraphic Correlation of Thailand Malaysia Vol. 1.** (1983). 383 p. Technical Papers. Price: Member: RM5.00; Non-Member: RM15.00 .
- Warta Geologi** (Newsletter of the Geological Society of Malaysia). Price: RM5.00 per bimonthly issue from July 1966.
- Geological Evolution of Southeast Asia** (1996) (Reprinted Edition) by C. S. Hutchison. 368 p. Price: Member :RM50.00; Non-Member :RM100.00; Student :RM30.00 .
- Common Rocks of Malaysia (Colour Poster)**. Price: Member: RM8.00; Non-Member: RM10.00; Student: RM7.00 .
- Malaysian Stratigraphic Guide** (Dec 1997). 30 p. Price: Member: RM5.00; Non-member :RM10.00; Student Member: RM2.00 .
- Proceedings Annual Geological Conference 2000**. 435 p. Edited by G.H. Teh, Joy J. Pereira and T.F. Ng. Price: RM60.00 .
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Mr Wheeler presenting the scholarship cheque to Professor Dr. Wan Hasiah.



*Mr Wheeler presenting the scholarship letter to Fatihah
witnessed by Chow and Nor Hazlijah*



Mr Wheeler presenting the scholarship letter to Husniyatul



Mr Wheeler presenting the scholarship letter to Nor Hazlijah



Mr Wheeler presenting the scholarship letter to Chow

BERITA-BERITA LAIN (Other News)

Up Coming Events

Forthcoming activities

1. November 28-December 2, 2006: New Zealand Hydrology Conference, Auckland New Zealand.
Contact: <http://www.iah.asn.au/pdfs/NZHS-IAH%20Circular1.pdf>
2. 3-5 December 2006: 2nd International Conference on PROBLEMATIC SOILS – call for papers.
Contact: Tel: 065 67332922; Fax: 065 62353530; Email: cipremie@singnet.com.sg
3. December 5-7, 2006: Oil & Gas in China, Beijing, China. Contact: www.spe.org/spe/jsp/meeting/.
4. 5-8 December 2006: OSEA 2006: The 16th International Oil & Gas Industry Exhibition & Conference, Singapore.
Contact: Fax: 065 67326776; Email: events@sesallworld.com
5. December 5-8, 2006: 16th International Oil & Gas Industry, Singapore. Contact: Fax: 44 20 7840 2119;
email: osea@oesallworld.com.
6. 11-15 December 2006: THE GEOTECHNIQUE WEEK (deep foundations cum Piletalk, geosynthetics, soil nailing and anchors, slope stability, landslides and geotechnical engineering) – call for papers. Contact: Tel: 065 67332922;
Fax: 065 62353530; Email: cipremie@singnet.com.sg
7. March 5-9, 2007: Second Alexander Von Humboldt International Conference on the role of Geophysics in Natural Disaster Prevention, Lima, Peru. Contact: R. Woodman (IGP), email: ronw@geo.igp.gob.pe; P. Fabian (EGU),
email: Fabian@met.forst.tumuenchen.de.
8. March 11-14, 2007: MEOS 2007 – 15th Society of Petroleum Engineers Middle East Oil and Gas Show and Conference, Bahrain. Contact: email: meos@oesalworld.com.
9. March 12-16, 2007: Basic geophysics, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580; email: registrations@petroskills.com
10. March 12-16, 2007: Seismic imaging of subsurface geology, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580;
email: registrations@petroskills.com
11. March 19-23, 2007: Basic drilling, completion and workover operations, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580;
email: registrations@petroskills.com
12. March 19-23, 2007: AVO, inversion, and attributes: principles and applications, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580;
email: registrations@petroskills.com
13. March 21-25, 2007: Foundations of petrophysics, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580; email: registrations@petroskills.com
14. May 7-18, 1007: Production operations I, Kuala Lumpur. Contact: PetroSkills, P.O. Box 35448, Tulsa, Ok. 74153-0448, USA. Tel: 800 821 5933/918 828 2500; Fax: 918 828 2580; email: registrations@petroskills.com
15. May 10-12, 2007: 3MA International Symposium: Magmatism, metamorphism, associated mineralizations, Fes, Morocco. Contact: Prof. Youssef Driouch, email: youssef.driouch@liberty.surf.fr.

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Snapshots of GSM's Yesteryear.....



Participants at the Geological Society of Malaysia's Discussion Meeting held at Geological Survey Headquarters, Ipoh. Photo taken on December, 20th, 1969.



First graduation ceremony held in the new University of Malaya Dewan Tunku Canselor in July 1966. L to R (Standing) Tony Leow, Bastian Koopmans, (X), Eric Toh, Chan Siew Hung, Mokhtar Hashim, (X), Dr Hutchison. Front Row from Left : Suntharalingham, Yeap Cheng Hock, (X). (X - Unidentified). All of them were from the Geology Department and were involved in GSM's activities at one time.

Photo courtesy and caption : Above photo hangs on the wall of GSM with original caption
Photo and caption below courtesy from Prof Dr Hutchison

WARTA GEOLOGI

Newsletter of the

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Geological Society of Malaysia

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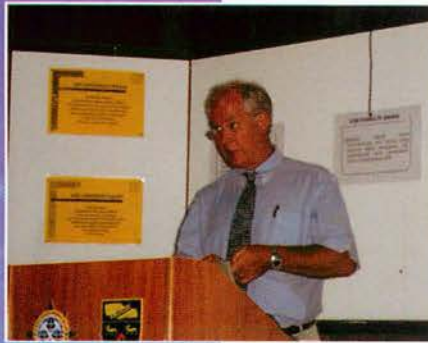
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