

## ASIA PACIFIC REGION PRESIDENT

Introducing Peter Grant,  
Asia Pacific Region President

Peter Grant

In January this year a new Board for the Asia Pacific Region was elected and I am honoured to become your new president.

By way of an introduction: I am a geologist by education, geophysicist by early profession and have enjoyed 40 years in the industry, with the last 30 in exploration management and global new ventures with BHP Petroleum and Woodside Energy based in Australia, while living around the globe.

My first position was as a seismologist working for SSL in Irian Jaya in 1974, where we found the Salawati oil field for Philips, onshore Salawati Island. (There is a little piece of Australia in the vicinity along the Sorong fault so there is a bit of home there.) So, I have a long history in the region with a collection of stories to tell if I can find attentive ears.

Next I would like to thank the outgoing team, especially my old (but young) friend Peter Baillie, who has done an outstanding job and has left me with huge shoes to fill. To help me with this task, I will be supported ably by the new AAPG team with Region Vice President Chris Oglesby (Mubadala Petroleum, Thailand), Region Secretary Reetu Ragini (Reliance Industries Limited, India) and Treasurer Michael McWalter (World Bank, Government of Papua New Guinea). And, of course where would we be without all the efforts of Adrienne Pereira who looks after us all out of Singapore?

Our business is a great business. We have challenges to meet, of course. But, where else do you have the opportunity to work in diverse countries and cultures, meet exciting colleagues and roll the exploration dice? People don't appreciate the risks we take and that most of our efforts (wells) will not be successful. At best we have a 25 percent success rate, so we will fail more times than we will be successful, but we have big shoulders and each well provides us with great geological insights. Of course when we are successful these developments deliver the finances required to drill more exploration wells, pay for seismic and move on.

My term as president has started with halving of the oil price, which I know has affected most of the geoscientists in the region. Budgets have been cut, exploration operations reduced and pressure is on jobs. Some of the old hands like me have seen this before as we tend to be a very cyclical industry, but it is never easy and doesn't get any easier, even if you have "been there before."

This is where a society like ours can help with our technical and training programmes, networking sessions and student and young professional bodies. Perhaps this might be a time

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when you want to upskill and AAPG would like to help you in doing so. Our website will provide information on scholarships and courses so please avail yourself of all this information.

As president of the Asia Pacific Region, my goal is to continue the vision that Peter Baillie focused on: good and relevant technical conferences and the nurturing of our student and young professional chapters. These bodies are the foundations for the lasting success of the AAPG.

So, as this year progresses, AAPG wishes to help all of our members, whether students, young professionals or oil and gas professionals in their development. I wish to grow our student chapters and offer advice to members if they are in times of difficulty due to the prevailing oil price.

My best regards to all. I hope I get a chance to meet with most of you during my tenure as president of AAPG Asia Pacific Region.

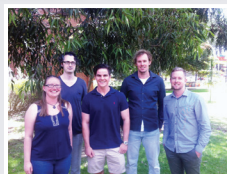


## EVENTS

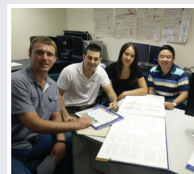
## Asia Pacific IBA Winner Announced

Curtin University of Perth, Australia beat out other competing teams to take the win in the Asia Pacific International Barrel Award competition. Curtin University will represent the Asia Pacific Region in the IBA competition finale set to take place in Denver (USA) in May 2015. We wish them all the best.

Honorable mentions were given to the University of Adelaide, Australian School of Petroleum and the China University of Petroleum (East China). Teams were evaluated on multiple aspects including: integrated petroleum systems analysis, basic technical interpretations, regional context and teamwork, among other things.



Curtin University, Perth,  
Australia 2015 IBA Team



The Australian School of  
Petroleum, University of  
Adelaide 2015 IBA Team



China University of Petroleum  
(East China) 2015 IBA Team

## Distinguished Lecturer Bruce Fouke Visits UPES

*State-of-the-Art Oil Field Geobiology: Implications for Exploration and Production*

*Article contributed by University of Petroleum Energy Studies, India*



Bruce Fouke

The University of Petroleum and Energy Studies (UPES) AAPG Student Chapter in Dehradun, India was pleased to organise the first Distinguished Lecturer Program featuring Bruce Fouke from the University of Illinois at Urbana-Champaign.

In his lecture, "State-of-the-Art Oil Field Geobiology: Implications of Exploration and Production," Fouke started with defining geobiology, the study that combines geoscience with biological information on microorganisms contained in rock. He also emphasized how geobiology is different from palaeontology and how it can be applied for oil and gas exploration. He focused his lecture on "microbes" and stated that planet Earth comprises of approximately 65 percent bacteria, of which 75 percent dwell in pore spaces in rocks. He also added that the human body is a bus that carries millions of microbes from one place to another.

Fouke shared his recent research on Yellowstone National Park that is famous for its wildlife and geothermal features. He began by presenting a short BBC documentary movie that gave an insight into the world of geobiology. He continued by explaining how Illinois Basin is a perfect dwelling place for a type of proteobacterium microbe, *Halomonas sulfidaeris*, which is responsible for oil degradation.



Metagenomic analysis performed on downholes provided some evidences that this microbe does not originate from drilling mud contamination.

Fouke concluded the lecture with a quote: "Excellence should be established in an area before stepping into another."

## AAPG President Visits IPTC Kuala Lumpur

AAPG President Randi Martinsen gave a plenary talk at the IPTC event held in Kuala Lumpur, Malaysia, in December.



AAPG Executive Director David Curtiss, Randi Martinsen, Adrienne Pereira and Alan Wegener with student chapter booth volunteers.



AAPG President Randi Martinsen with visiting students.

His research in the world of microbes and the reckoned accounts of the world geobiology left the audience shockingly aware of the facts they were bereft of.

The lecture was followed by a lively and engaging Q&A session with the curious audiences. The event ended with the launch of UPES AAPG Student Chapter newsletter second volume titled "GEOCACHE-Hunt for geology" featuring Fouke.

UPES AAPG Student Chapter thanks Fouke for his outstanding and thought provoking lecture. We feel honoured to have had such an opportunity and we wish him the best of luck.





## AAPG Young Professionals Leadership Summit 2014

*By Low Wan Ching, Asia Pacific Region Representative*



*AAPG YPLS participants in Snowbird, Utah.*

The AAPG Young Professionals Leadership Summit (YPLS) was held in Snowbird, Utah in August in conjunction with the 34th annual AAPG Leadership Days, and was chaired by Jonathan Allen and Meredith Faber.

I was absolutely thrilled to be invited and selected by the AAPG YP committee to be part of the AAPG YPLS event with the other 18 young professionals from other Regions and Sections. In fact, it was my first time attending an AAPG related organised event outside my country, let alone travelling 20 hours all the way to Snowbird, Utah to attend this highly prestigious AAPG event!

The YPLS two-day event mainly consisted of group discussions and mini workshops. The first day, Jonathan and Meredith conducted a mini workshop for the participants. They gave a very detailed explanation from everything related to AAPG Young Professionals in terms of YP handbooks, AAPG values, website and budget overview, which was really helpful for us, AAPG YP leaders, to have a better understanding of how to run the organization.

The second day, the workshop continued and was followed by more frequent discussion sessions among the participants. Some of the excellent topics for the discussion group were: How to retain students for AAPG after their graduation and also challenges faced by AAPG YP running events from respective Regions and Sections. Besides, it was really great that head representatives of the Regions sat down and had a mentoring session with all the YP participants to work on the challenges faced in different Regions.

The third day, the 34th annual AAPG Leadership Days officially kicked off. The AAPG YP participants were invited to join the main event with the main delegates as well. AAPG President Randi Martinsen gave an excellent welcoming speech. Jay Barney, professor from the School of Business at University of Utah, gave a wonderful talk on a business study case. All participants attended the pre-field trip lecture overview by Ron Harris about the geology of Albion. After the lecture, we set off on a hiking field trip to Albion Canyon. It was an excellent hike, with amazing scenery on top of the mountain. That evening we had a stargazing lecture from Katie Densley. We were very lucky on that night as we got to observe the full moon and stargazing using the powerful telescope provided by Katie.

## AAPG GTW Successfully Completed in Brisbane

AAPG Asia Pacific Region's first GTW in Australia, "Opportunities and Advancements in Coal Bed Methane in the Asia Pacific" welcomed 27 expert speakers and 101 delegates who enjoyed the presentations and mostly the networking. It was co-organised by the University of Queensland Centre for Coal Seam Gas and supported by PESA Queensland.

Much appreciation goes to convenor Andrew "Alf" Garnett of UQ, as well as sponsors: UQ, Santos and Welldog.



*YPLS participants enjoyed a field trip hike in the Albion Canyon.*

The final day of the event, the AAPG YP participants were invited to attend the overview of all the report updates from various committees such as the House of Delegates report, headquarters report, as well as update reports for student chapters and young professionals.

Overall, it was an eye-opening experience for me and most of AAPG YP participants, as I believe most were attending the YPLS event for the very first time. The major outcome of the YPLS event is that I managed to understand the processes and key persons in AAPG headquarters much better and also got to network with other young professionals from various Regions and Sections around the world. The YPLS certainly helped and provided me a lot of guidance to run AAPG events for my local YP chapter in Kuala Lumpur in the future. Many thanks to Reetu Ragini, Asia Pacific YP coordinator, and Adrienne Pereira for supporting the KL YP chapter.





## Curtin Geology Day 2014

*Curtin University Student Chapter, Malaysia*  
*By Syafinaz binti Sulaiman*

Curtin Geology Day 2014 was an event organised by Curtin Geology Club at Curtin University Sarawak, Malaysia, September 2014. This event was conducted by first-year students of applied geology with help from seniors, lecturers and staff of the Department of Applied Geology.

About 70 students from three secondary schools in Miri, Northern Sarawak, Malaysia participated in this event: Sekolah Menengah Sains Miri, Sekolah Menengah Kebangsaan Pujut Miri and Tenby International School Miri.

Curtin Geology Day 2014 was held in order to introduce geology as one of the future choices for their tertiary-level studies. The event began with speeches from Ramsamy Nagarajan, head of the Department of Applied Geology and the organising chair. The event was officially launched by confetti-pop and continued with a lion dance performance from Lion Dance Club of Curtin University Sarawak. The participants were then divided into several groups based on each school and were provided a campus tour. From this activity, participants had a chance to acknowledge more about the environment in the geology department at Curtin University Sarawak.

A highlight of the event was the sharing session. Seniors from the geology department came and shared their experiences as students

of applied geology in Curtin University Sarawak and shared some useful tips to the participants. This session was important because it aimed at triggering the interest of students in geology. We would love to see them again here at Curtin University Sarawak.

The closing ceremony was attended by most of the lecturers and staff from the Department of Applied Geology. Every school received a gift and all participants received appreciation certificates from the Curtin Geology Club.

The event was well received by all participants and praised by the lecturers and staff from the geology department. The activity was successful as the number of attendees participated in the event exceeded 50 students (75 students overall).



*The participants, the committees and staff of the Department of Applied Geology.*



*The best group for the event – group Earthquake.*

## Trapspot Third Annual Event

*By Nurisman Syarif, Universitas Padjajaran Student Chapter President*



The third annual Trapspot event was successfully concluded in November 2014 by the Universitas Padjajaran Student Chapter. Trapspot (Through a Petroleum System, National Seminar, poster contest and field trip) is a series of annual events that have been conducted by AAPG Universitas Padjajaran (UNPAD), Indonesia student chapter since 2012. The basic purpose of this activity is to form a well-maintained relationship and good synergy not only among AAPG student chapters throughout Indonesia, but more importantly between geosciences students and petroleum industry.

The two-day event of national seminar and poster competition themed, "Natural Gas Vision for Future Indonesia," was attended by nine different universities in Indonesia. The keynote speakers were country head of BP Indonesia Dharmawan Samsu, vice president of corporate service at Inpex Corp. Nico Muhyidin, vice president of Total EP Indonesia Noor Syarifudin, and Bani and Wendy with SKK Migas. Several professionals from British Petroleum, Total E&P Indonesia, and Padjadjaran University were judges for the poster competition.

The field trip of Trapspot 2014 was held in Pertamina EP Asset 2 PMB 31 Well, Prabumulih, South Sumatra, Indonesia. Twenty-five selected students went to Prabumulih to learn about upstream activity in the

oil and gas industry. The field trip was followed by a short course in Pertamina EP Asset 2 before participants visited the oil rig and mudlogging unit.

This event was fully sponsored by INPEX, Total Indonesia, Vico Indonesia, Conoco Phillips Indonesia, BP Indonesia, PSE Unpad and Pukesmigas.



*Trapspot 2014 national seminar*



*Trapspot 2014: poster competition*



*Field trip: Pertamina asset 2, Prabumulih, South Sumatra*



### Modern Depositional Systems as Analogues for Petroleum Reservoirs

Wellington, New Zealand  
21-22 April 2015  
Convenor: Mac Beggs, New Zealand  
Oil & Gas Ltd.

### Tectonics and Sedimentation of South China Sea Region

Kota Kinabalu, Sabah, Malaysia  
26-27 May 2015  
Convenors: Ioannis Abatsiz, CCOP  
Denmark and Herman Darman, Shell,  
Malaysia

### AAPG/EAGE/MGS Geosciences Conference

Yangon, Myanmar  
19-20 November 2015  
Three sister societies will present a  
geosciences conference in Yangon.  
Details to come soon.

For more information, contact Adrienne Pereira ([apereira@aapg.org](mailto:apereira@aapg.org)) or visit [www.aapg.org/events/event-listings](http://www.aapg.org/events/event-listings)

## RESEARCH, DISCOVERY AND DEVELOPMENT

# An Overview of Shale Gas Resource in China's Sichuan Basin

By Jiangtao Sun and Da Huo, Rice University

### Introduction

China has the largest shale gas reserve in the world. The 2013 EIA global shale report estimated that 1,115 Tcf technically recoverable shale gas exists within China territory. Of all the major shale basins in China, (Sichuan basin, Yangtze Platform, Junggar basin, Tarim basin, Songliao basin, Jiangnan basin and Subei basin) the Sichuan basin has the greatest potential, with an estimated 627 Tcf of technically recoverable shale gas reserve.

### Geology of Sichuan Basin

The Sichuan basin covers a large 74,500 mi<sup>2</sup> area in south-central China, this basin was part of a passive margin during Precambrian to Mesozoic time, transitioning into a foreland basin setting during the Mesozoic to Cenozoic. Three major tectonic events punctuated during that period of time, including regional extension during the Caledonian and Hercynian orogenies (Ordovician to Permian), a structural phase transition during the Indosinian to early Yanshanian orogenies, and a compression during the late Yanshanian to Himalayan orogenies (Cretaceous to Neogene).

The Sichuan basin evolved from a Sinian Middle Triassic (Z1-T2) passive continental margin, during which thick marine carbonate and clastics interbedded with volcanics were deposited. In the Late Triassic, the basin was affected by closure of the Palaeo-Tethys and the subduction of oceanic crust of the Yangtze plate. The Jurassic Quaternary was a foreland basin stage with intense folding, uplift and erosion. Multiple stages of tectonic events contributed to its current tectonic framework, a series of NE-SW echelon folds were formed. According to gas exploration results, the most noticeable geologically feature in Sichuan Basin is the discontinuous fold dominant gas reservoirs.

Four tectonic zones are now identified in Sichuan basin (Fig.1): the Northwest Depression, Central Uplift and the East and South Fold Belts. The Central Uplift, characterized by relatively simple structure and comparatively few faults, appears to be the most attractive region for shale gas development. In contrast, the east and south fold belts

of the Sichuan basin are structurally more complex, characterized by numerous closely spaced folds and faults with large offset; these areas are not considered prospective for shale gas development.

### Main Shale Targets

The four main shale targets in the Sichuan basin are: the L. Silurian Longmaxi, the L. Cambrian Qiongzhusi, the L. Permian Qixia and the U. Permian Longtan formations and their equivalents.

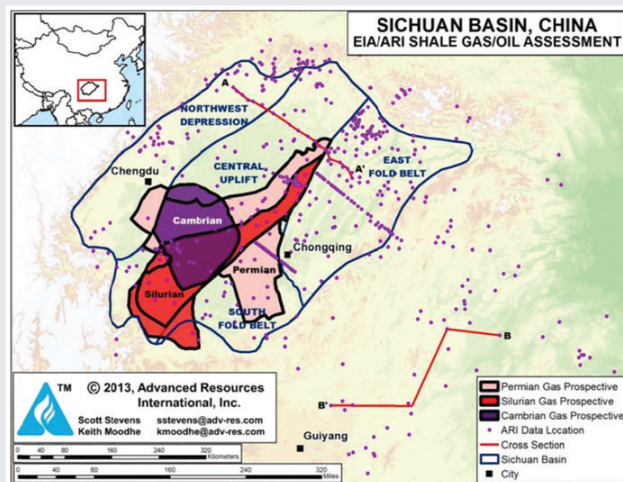


Figure 1: Shale gas prospective and data locations in Sichuan basin according to EIA/ARI 2013 World Shale Gas and Shale Oil Resource Assessment.

Most important is the L. Silurian Longmaxi Formation, which contains organically rich, black, graptolitic-bearing, siliceous to cherty shale. TOC content is up to 4 percent, consisting mainly of Type II kerogen, comprises organic-rich black shale unit deposited in an anoxic deep-water setting. The Longmaxi Formation consists of considerable thickness black shale (Fig. 2), which now considered as the most important source rock of Sichuan basin.

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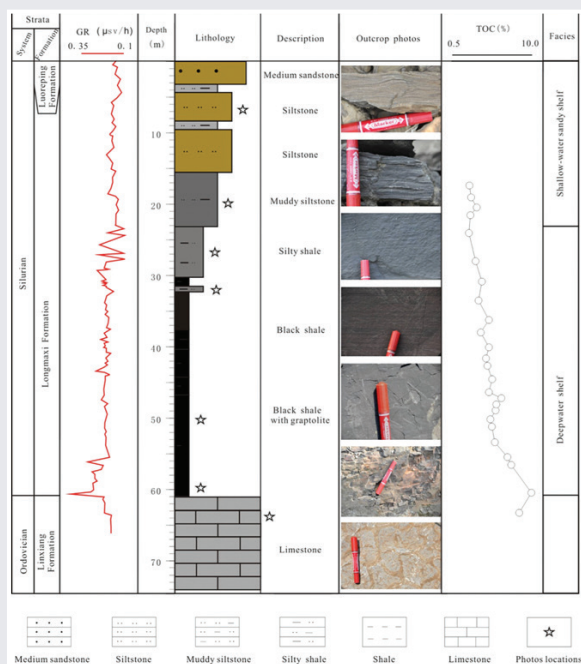


Figure 2: The stratigraphy of Longmaxi shale of Lujiao outcrop. (Liang et al., 2014)

The Cambrian Qiongzhusi Formation is deeper than the Longmaxi and mostly screened out by the 5-km depth cutoff, the Qiongzhusi contains high-quality source rocks. The deposition environment is shallow marine continental shelf conditions, it has an overall thickness of 250 m to 600 m. PetroChina recently tested the first horizontal well completed in the Qiongzhusi at Weiyuan field.

### Government Incentives and Recent Activities

As domestic natural gas consumption outpaced production, China has recently become a net gas importer. In order to relieve the pressure on natural gas supply and address the serious pollution raised by coal, following the launch of the 12th Five-Year Plan, the Chinese government has set a series of incentives to develop its shale gas reserve. In 2012, the Ministry of Land and Resources (MLR) defined shale gas as an independent mining resource, allowing private Chinese companies to share exploration rights with state owned companies. In addition, fiscal incentives such as subsidies and gas pricing reforms were introduced. In August 2014, the Ministry of Finance announced that a subsidy of 0.4 yuan (6.3 cents) per cubic meter of gas will be offered to shale developing enterprises during the 2012-15 period. Pilot price reform has been partly practiced in

some southern provinces to introduce a more market oriented pricing mechanism and thus encourage domestic shale development. In August 2014, the National Development and Reform Commission (NDRC) announced that starting Sept. 1, gas wholesale prices for non-residential users will rise by 20.5 percent (around 0.4 yuan or \$0.06 per cubic meter). This act is aimed to bring domestic gas price to the same level of international gas prices. Moreover, a higher gas price will further stimulate stronger interest from investors.

By far, the MLR has held two shale block auctions in 2011 and 2012, respectively. During the first auction, two shale blocks, both located in the Sichuan basin, were awarded to China Petroleum & Chemical Corp. and Henan Provincial Coal Seam Gas Development and Utilization Co. Disappointingly, both of these companies failed to invest as much as committed capital into their shale blocks. The second auction offered 19 blocks towards 16 domestic companies including six state-owned enterprises, eight local government owned companies and two private companies. Little progress has been made within these blocks by far. In addition, foreign companies like Shell and ConocoPhillips also participated in China's shale industry by signing joint agreements with national companies. The Sichuan basin by far is China's most active area in terms of shale leasing and exploration activities.

### Forecasts and Plans

The annual shale gas production of China in 2014 is 1.6 billion cubic meters. In March 2014, China Petroleum & Chemical Corp. announced that with some significant breakthroughs in its resource evaluation system, technology system as well as R&D and manufacturing of fracturing equipment, the company plans to develop the Fuling shale gas field into China's first shale gas field with annual production capacity of 10 billion cubic meters by 2017.

On the other hand, faced with several unfavorable factors such as technology barriers, water shortage, geological complexity and high drilling cost, the Chinese government has recently cut the shale production target in 2020 in half. However, forecasts suggested that by 2020 China would break the barrier of pipeline and fracturing (fracking) technology to accept shale gas in a much deeper extent. China is marching confidently towards the production goals of 6.5 billion cubic meters in 2015 and 26 billion-36 billion cubic meters by 2020.

In conclusion, as world's top one energy consumption growth country, China is still taking fossil fuels as its main energy source for at least another 20 years. The falling international oil and gas price will not stop China from investing in shale gas. Unconventional resources such as shale gas are now gradually replacing coal as a key energy source in China.

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## STUDENT AND YOUNG PROFESSIONAL ACTIVITY

### KLYP Chapter's First President Interview Q&A



*Low Wan Ching*

**Q:** As a founding member, could you give the details of the newly formed Kuala Lumpur AAPG YP Chapter and your part in its formation?

**A:** After attending the World Gas Conference and other petroleum conferences, I realized there is a lack of platforms for geoscience young professionals to network. As I observe typically during the major conference, most of the social networking events are exclusive for senior management. Hence, I decided to form the AAPG Young Professional for KL Chapter. I believe this is the first professional body solely formed to serve the needs of all geoscience young professionals and students in Malaysia. As the current president of this new chapter, I currently work with 15 committee members who hail different oil companies. My main role is to lead my team to plan and coordinate all networking activities, visiting geoscientist talks and field trips for the geoscience young professionals and students.

**Q:** What are the roles/goals of the YP Chapter and what do you hope to accomplish?

**A:** Our main goal is to be the platform that serves the need for university geoscience students and young professional geoscientists (less than 10 years working experience) to learn, network and eventually create a successful career for themselves in the energy business. Most importantly, we want to build an understanding of the value of a lasting relationship between AAPG and young professional members. Basically, KL AAPG YP offers endless opportunities for networking, career guidance, learning, and enhancing professional competence by organizing events. We plan to organise more events such as Visiting Geoscientist Talks, networking events, fundraising events and YP career talks for the university geoscience students.

**Q:** How excited are the young professionals in embracing the chapter?

**A:** After organizing three visiting geoscientist talks for our group – consisting of more than 50 geoscientists from multinational companies, independent companies and service companies – yes, we definitely see a positive response and excitement from the young professional geoscience community in Kuala Lumpur. In fact, this is the only professional body that addresses the needs of this specific young professional geoscientist age group and also serves as a link for the geoscience university students.

**Q:** Could you describe your personal experience in being active in the chapter? How do you benefit from the participation?

**A:** So far, I have personally coordinated the VGP talk for Liaw Kim Kiat with Saudi Aramco and Herman Darman with Shell Netherlands. Fortunately, we managed to invite these highly experienced experts (at least 30 years' experience) to share their working experience in carbonate reservoir, Middle East and Caspian Sea to the young professionals to further enhance their technical skill. They generously shared their useful technical workflow, work issues and also any common mistakes made. It was a very fruitful learning process for us young professionals as it is impossible to get any learning opportunities like this if our company doesn't operate in this region of the world. It was a great learning discussion together as well after the talk ends.

**Q:** What is your advice to young geoscience professionals out there?

**A:** My personal advice for young geoscience professionals is to never stop learning and always be active with a professional body such as AAPG to enhance your learning opportunities and to network with more people. Most of the time, when you face technical problems with your work, you are more likely to find an expert with the right solution if you're able to tap into the huge network circle of geoscience friends, such as the huge geoscience community of AAPG, which is located worldwide.

### AAPG Lunch Talk Series: Kuala Lumpur AAPG YP Chapter

*By Avalon Chin Soon Mun and Jeen Ching*



*Murphy presenting his talk.*

AAPG YP Kuala Lumpur Chapter organised the sixth round of joint-venture technical talks with the Indonesian Association of Geologists KL Chapter (IAGI) in October. We were very pleased to welcome Colm A. Murphy as our speaker. Murphy is currently a senior

geoscientist responsible for the management of all aspects for geosciences with Bell Geospace. He addressed us on the subject of Full Tensor Gravity Method: "What it is and how it is being used to advance exploration programs."

About 60 participants from universities, oil companies – both operators and service providers – attended the talk, which took



*Question and answer session from the participants.*

place at Hotel Maya. Throughout the 90-minute talk, we were entertained by his presentation on the technology being used in FTG, how it works, what it detects and how it is being deployed. We also were exposed to FTG's technology as

a key to risk reduction tool, which has been an instrument in many exploration programs.

With introductions by Avalon Chin and welcoming remarks by Herman Darman, past president of AAPG Asia Pacific, Murphy commenced his talk by introducing the Full Tensor Gravity Gradiometry (FTG) and the history of the

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*Presentation of appreciation to Colm A. Murphy by Herman Darman.*

optimized survey planning, target prospecting, as well as reducing risks for various exploration activities.

FTG has a number of significant advantages over other conventional survey methods such as seismic surveys in which a stable platform enables greater production rate with longer endurance. In combination with state of the art technology, the data acquired is low of noise with high resolution. Several successful exploration projects particularly in oil and gas industry include locating structural closures in Perth basin and East African Rift, carbonate reefs prospecting in the Philippines, and subsalt imaging in the Gulf of Mexico and North Sea. Prospect of FTG in mining may be further developed as demonstrated by several successful projects such as prospecting diamonds and other metal deposits.



*Organizing committee with Murphy.*

a token of appreciation to speaker Murphy by Darman. We appreciate Murphy sharing his time and expertise, and hope to welcome him back soon.

tool being used in oil and gas industry. There are two types: Marine-FTG and Air-FTG. For Air-FTG, the measurement of 3D gravity field is done by using gravity gradient instruments, which enables subsurface geological mapping. The processing of FTG data and interpretation workflow with data enhancement features

The talk ended with questions and answers by the participants, followed by the presentation of

## China University of Petroleum Receives Book Donation



Members of the AAPG Publications Pipeline Committee delivered two pallets of donated geoscience books to the China University of Petroleum. Chevron China Energy Co. sponsored the freight. A handover ceremony was held in November.



*Left to right: Min Chen, vice president of Chevron China Energy Company, Jia Chengzao, AAPG representative and former vice president of PetroChina and Chinese Petroleum Society, and Xiongqi Pang, vice president of China University of Petroleum, Beijing*

## Martinsen Visits University of Delhi

*By Kartikeya Singh Sangwan*

Randi S. Martinsen, president of AAPG, visited the Department of Geology, University of Delhi in January. Her visit was met by excitement and overwhelming happiness from the students of the department. It presented a great opportunity for the students to understand AAPG from the very words of the person at the helm of it.

Professor G.V.R. Prasad gave a warm welcome to Martinsen on behalf of the geology department. Martinsen introduced AAPG to the students and scholars, encouraging them to become a member of the AAPG student chapter. She talked about history, extent, membership, work and benefits of AAPG, highlighting every aspect of the Association.

The discussion was not restricted to AAPG. Martinsen also talked about shale gas and its exploration, limitation and its economical use. She gave the students a perspective of the nano-scale porosity and migration of kerogens through it. To add in a flavor of India, Martinsen highlighted the potential sources of shale gas in India. Probably the most interesting segment for the students were brief

Q&A sessions between her talk where students won t-shirts for giving correct answers.

On behalf of AAPG, Martinsen gifted AAPG memoirs, DVDs and monthly publications to the Department of Geology. P.P. Chakroborty expressed gratitude to Martinsen on behalf of students and faculty alike for taking time out of her busy schedule. As a token of thanks she was presented with a shawl and a memento from the department. The AAPG Student Chapter of University of Delhi eagerly waits to have her among us again in the near future.



*Martinsen addressing the students.*



*Martinsen with G.V.R. Prasad.*



## Career Talk: A Future with Halliburton

*By Aishah Binti Shamsuddin, University of Malaya Student Chapter Secretary*

A career talk by Halliburton was organised by the AAPG Student Chapter of University Malaya in November. About 40 students came to the talk mainly from the geology department and others from the mathematics department and engineering faculty. The speakers from Halliburton were Ilen Kardani and Lee Chung Yee; as well as participated representative Ivan Wu, University of Malaya alumnus.

The main objective of this career talk was to expose the students to their future working environment apart from enhancing their knowledge about their opportunities in the oil and gas industry. The students also were briefed about how to write an effective curriculum vitae as it is the main ticket to obtain a job in the working industry. Students were encouraged to hand in their résumé if interested in an internship programme or to apply for a job at Halliburton.

The first speaker was Lee Chung Yee, the technical professional of Halliburton, who talked about basis of geophysics in terms of job application. In the drilling industry, Halliburton designs drilling programs that increase recoveries and require lower costs by minimizing nonproductive time and boosting production rates. For upstream oil and gas, Halliburton delivers drilling performance to improve well bore quality and add value to overall well construction. Moreover, Lee explained more about the types of drilling used, the software used to deal with different rock types, details of the well design and also about the seismic data analysis.

The event continued with the second talk by Ilen Kardani, the regional competency coordinator of Halliburton. Ilen gave a talk regarding the purpose of life and character building definition, which successfully caught the attention of every student in the hall. He stressed and highlighted about the essential information needed by students to improve their self-management in every aspect, such as studies and also co-curriculum. Other than that, he also advised the students to enrich themselves with more skills and knowledge, especially the ability to handle computer software and speak fluent English. Another significant reminder to the students from Ilen is about teamwork. Regardless of your occupation in the company, you must work as a team where mutual support and understanding of one another is vital.

After the talk, a question and answer session was opened to the participants concerning the current issues faced by the company, the job scope of work positions, a career for women, internship tasks and also about the engineering field in Halliburton. The event ended with presentation of souvenirs to the company by Aishah binti Shamsuddin as the event director.

Highest appreciation is extended to all AAPG Student Chapter members, non-members, participants, staff and lecturers, especially Ralph L. Kugler, our adviser and associate professor Ismail bin Yusoff for their assistance and guidance. Gratitude also is expressed to Halliburton for the support and cooperation.

## Successful Collaboration: Student Chapter, Petroleum Industry

*By John Waldon Counts, Adelaide University Student Chapter President*



The University of Adelaide AAPG student chapter conducted its annual field trip to the Otway Basin and Limestone coast in South Australia and Victoria. The five-day field trip was led by Bob Dalgarno, former director of the Geologic Survey of Victoria. The group consisted of not only students

from Australian School of Petroleum but also industrial participants from ExxonMobil, Woodside, Cooper Energy, Terratek and Beach Energy. The trip was co-sponsored by the Petroleum Exploration Society of South Australia.

The focus of the trip was the Paleozoic-modern history of the area, from rifting in the Jurassic during the breakup of Gondwana to Cretaceous sediments of the Otway Basin (an active petroleum target), to Tertiary volcanic activity. Stops included several quarries, roadcuts and natural exposures showing a wide variety of geologic features. The hydrogeology and groundwater systems of the Limestone Coast region of Victoria was also examined, including the Mt. Gambier Blue Lake, a flooded volcanic crater. Participants were treated to scenic views of the Australian landscape while learning the history of a unique geology area. Highlights included a lecture from the summit of Mt. Rouse (an extinct volcano), a hike through the Coorong lagoon to see modern carbonate deposition and excellent

views of Pleistocene coastal dune systems. A good time was had by everyone and the group contributed several hundred dollars to the local Royal Flying Doctors charity.

This continues tradition of the successful annual field trip held by the University of Adelaide AAPG student chapter in November 2013. A similar three-day field trip was held to the southern Flinders Ranges and participated by both students and industry professionals from Woodside, Geoscience Australia, Beach Energy, Santos, Cooper Energy and Esso Australia. The field trip was also sponsored by PESA (Petroleum Exploration Society of Australia). Last year the field trip focussed on the latest Neoproterozoic sequence of the southern Flinders Ranges.



*Bob Dalgarno discusses the volcanic history of Victoria from the summit of Mt. Rouse.*