

## From a Bright Idea to Key Discovery to Old Landscapes



**Dr. Eloi Dolivo**  
Exploration & JV Manager



In March 2012, MPRL E&P, a Myanmar national led oil & gas company, while drilling an intentional sidetrack of Well Pyi Thar-1 its very first well in offshore Block A-6, discovered a 62 meters sequence of sands and clays, with the top 20 meters filled with gas, including 6 meters of clean gassy sands. This well opened an entirely new gas play in the western waters of the Ayeyarwaddy Division. Since then, two more wells have discovered more commercial gas in the deep waters of the block, resulting in three gas discoveries in four wells drilled to explore Block A-6.

There is an old saying among geo-nerds that "Petroleum is first found in the Mind." This summary paper describes how an idea led to a history

making pioneering discovery, which in turn matured into the revelation of an old landscape. The reconstruction of these old landscapes is essential for the definition of sedimentary basins, which are the indispensable nests of petroleum plays. In the case of MPRL E&P, the petroleum geological play discovered by Well Pyi Thar-1 led to the realization of a new sedimentary basin: the West Ayeyarwaddy Basin.

### **Continents Move and Petroleum Accumulates along the Way**

As already described in March 2017 issue of Insight! Geology is essentially the art of reconstructing old landscapes. While the ingredients to make a petroleum discovery were reviewed



in June 2017 issue of Insight! let's remember that the location as well as the first condition for petroleum accumulations is the presence of a sedimentary basin.

A sedimentary basin is a depression, a vast pan, created by the movement of tectonic plates to collect all sediments eroded by wind and/or rain and transported by gravity, whether by

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## Your Opinion : Social Media Pros & Cons

### U Soe Sithu

Junior Engineer  
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People use social media for different purposes like entertainment, education, business, and also to keep in touch with friends and relatives. Social media is a good way for people to communicate, suggest, share and engage with each other because social media brings the benefits of immediate, powerful and effective interactions. For business some of the good points of using social media are reduced marketing/advertising costs, sharing product information and latest news instantly with customers, and improved networking opportunities with other businesses.

However, everything has a limit. Therefore, I think it is good to limit yourself from spending too much time on social media, by tracking how much time per week/month and day is spent

online. Another way to avoid spending too much time on social media is to get a new hobby like doing physical exercise (gym, yoga) or studying languages or spending more time with friends and family instead of living through a screen. Social media is not all bad though as it offers knowledge concerning health, education, technology and business. However, if you think you're spending too much time using it without any advantages, you need to take an honest self-assessment.

As for myself, I used to spend much of my time on Facebook. The side effects of surfing the internet for such a long time were that it cost a lot of money and my eyesight suffered. My eyes became sore after looking at my phone screen and I also noticed that I spent less time with my family. So I kicked the habit of spending prolonged hours online, and in doing so, I could save a lot more money.

I replaced the time I used to spend on social media with workouts at the gym and as a result I have noticed that I am now in good shape and health. I would like to suggest to all of my colleagues to conduct a self-assessment of your time and money spent on social media, and instead to spend more time with family and friends. Don't let your smart phone or social media stop you from enjoying human interactions and loving your life! ■



### Daw Soe Thinzar Aung

Executive Office Assistant  
Country Manager Office

It is my great pleasure to have a chance to write my opinion on social media platforms which are very popular these days. A major portion of the younger generation, teenagers and middle aged people, make up a percentage of the total social media user's population. There has been considerable debate about the effect of social networking sites on individuals and societies, as social networks have gradually evolved into an integral aspect of people's daily lives.

It is true to say that social networking sites offer many benefits in our personal life, for example, they can keep us in contact with real-life friends, allow us to meet other people based on shared interests anywhere and anytime, and can also serve as an online shopping resource, which offers us a variety of things from all over the world. We can use Twitter to access the latest news. Also, by using Facebook, we have the opportunity to make new friends, get updated information in many areas and find job opportunities. In my case, I saw the vacant position posted on the Facebook page of MPRL E&P and now I am working here as one of the staff members!

In business, more and more companies are capitalizing on the benefits of social media. Advertisements strategically placed within informative posts are an effective way to spread the word about your business. Moreover, social media is cost effective as most social media advertising is cheaper than traditional advertising, so you don't have to spend a lot of money to reach more people, increase your audience and grow your business. As smart phones took the place of mobile phones and sim cards can be bought easily everywhere, the use of social media via smart phones is quite popular these days. But using social media overly can cause harm. For example, youth and teens who use Facebook or other social networking sites for a long time every day, can be harmed physically and behaviorally. Moreover, these sites will lead to wasting of time if we cannot use them efficiently. It is suggested that proper usage of social media platforms is needed despite several benefits and we need to achieve a balance through specific set times for work and for enjoyment. ■



# Building Business Integrity: A Practical Workshop on How Businesses can Combat Corruption

Wit Hmone Tin Latt

2 August 2017, Yangon - The MCRB and the UN Office of Drugs and Crime (UNODC) co-hosted a workshop on strengthening integrity in the business sector with a focus on anti-corruption measures in and for the private sector. The two representatives from MPRL E&P Group of Companies, U Zaw Lwin from the Compliance Department and Daw Wit Hmone Tin Latt from the CSR & Communications Department, participated at this full-day workshop held at Novotel Hotel.

Businesses who attended had the opportunity to share experiences of corruption risks in Myanmar; learn about successful approaches to combatting corruption at the company level – including how to prevent and resist corruption; gain a better understanding of setting up a strong anti-corruption policy; learn how companies can get their employees to comply with the policy; and identify opportunities for collective action. The workshop also discussed 'grey areas' such as gifts and donations, drawing on the official guidance on gifts to government officials issued in April 2016.

Establishing codes of conduct or defining integrity principles is also fairly common for businesses across the region. While complying with the minimum of legally binding standards, companies can also take many different measures to promote business integrity and ensure compliance voluntarily.



Companies, which participate in the UN Global Compact and use integrity promoting measures, most often have internal written policies, codes or regulations (anti-corruption policies, ethics rules, conflict of interest regulations, etc.). Less frequently but still commonly reported activities

include integrity-related training of employees, internal channels for reporting incidents, integrity-related requirements for business partners, and dedicated integrity units or officers. Smaller numbers of companies report having transparent procurement procedures, integrity risk assessments

and particular measures for the protection of whistleblowers, which exceed the mere possibility of submitting reports anonymously. Stronger integrity policies are typically found in companies which are publicly traded and must comply with rules of the stock exchange, companies with signifi-

cant foreign investments or partners, and companies in sectors where corruption causes particularly high business risks. However, there is still evidence that many companies of the region do not often use or apply their anti-bribery and corruption procedures. They recognize whistleblowing as a means to strengthen anti-corruption efforts but do not ensure proper procedures for the protection of whistleblowers, therefore practical workshops such as the one co-hosted by the MCRB and the UN Office of Drugs and Crime (UNODC) is a valuable resource for the region. ■

“ While complying with the minimum of legally binding standards, companies can also take many different measures to promote business integrity and ensure compliance voluntarily. ”

## MPRL E&P Team Joined Family Feud Game Show on Channel 7

Thal Sandy Tun

Daw Hla Yin Nyein from the Administration and Contracts Department, Daw Nang Hseng Noon and Daw Su Shwe Cin from the Finance Department, and U Han Lin Zaw from the Material and Logistics Department took part on July 22<sup>nd</sup> on a TV program on Channel 7, named the "Family Feud Television Game Show". In the show, two family teams compete to win cash prizes by providing the most popular responses to survey questions. The four staff members from MPRL E&P love travelling and went on many trips together, and in one trip they decided to join the Game Show after having watched it on TV several times. They hoped they would be seen by all their friends and families as the program is aired nationwide and since they loved to travel together, they named themselves "The Four Travelers" and entered the show as a family of four members.

"When we came to know that there was a jackpot question session at the end of the quiz show for the winning-family, we wanted to reach that level and pass the test with as many marks as possible", said Daw Hla Yin Nyein. U Han Lin Zaw, another participant said, "We didn't get much time to think during the Game Show as it

basically needs us to answer questions quickly before the time is up. The host, a friendly and funny guy, asked us questions relating to many subjects in general. If we could not give an answer within three seconds, the other team would get the chance to answer and gain marks".

The team played Fast Money by

defeating the first family they met and won MMK 127,000. During the competition, they also got an opportunity to learn about how the TV crew arranged the shooting of the program and the other ways the crew prepared for the show.

Finally, at the end of the Show, the team believed partaking in such a fun activity outside of work

let them all experience stronger team spirit and increase mutual understanding of each other. They came to have a better understanding of each other's strengths and weaknesses and realized the importance of teamwork and good communication, all lessons which led to their success. ■



# Training for Making Value-added Food Products Provided in Mann Field

Thal Sandy Tun



The opening ceremony of a training program to provide skills for making value-added food products was held on August 24<sup>th</sup> in Mann Field. At the ceremony, U Soe Myint, Minister of Agriculture, Livestock and Irrigation, U Nay Myo Kyaw, Minister of Labor, Immigration and Population, U Ye Naing, General Manager of MOGE (Mann Field), U Win Bo, Deputy Director-General of SMEs (Small and Medium Enterprises) Department, Magway Region delivered opening speeches and a representative from the CSR and Communication Department of MPRL E&P explained about the purpose of providing the training. The ceremony was attended by U Myint Zaw, Minister of Natural Resources, Environment, Electric Power and Energy for Magway region, U Kyaw Swan Yi, Hluttaw Representative of Magway Region, officials from Minbu Township, officials from villages in Mann Field, Members of Development Committees, community representatives, officials from regional SMEs Department, trainers and trainees.

MPRL E&P, partnering with MOGE in Mann Field, has carried out its CSR initiatives in a holistic manner involving all stakeholders concerned rather than merely just philanthropic work. MPRL E&P also ensures mitigation of damage to the local environment and prioritizes workplace safety for its employees. In addition, MPRL E&P implements infrastructural projects to meet the needs of the local communities and developed a system which addresses grievances incurred by local people as a result of its operations. Along with need assessments and public consultations with village officials, elders, Development Committees, and communities, regular engagement and reviews are carried out from the beginning until the end of the projects to ensure sustainable results.

In making efforts to contribute to local development, there is a need to deal with infrastructural gaps. It is also important to modernize local livelihoods, to develop new livelihood options in agreement with local context, and to provide opportunities to learn technologies and skills for production of high-value food products. The training, which is implemented as part of a community investment initiative to promote the interests of the local people lasted for a week and was attended by 4 male trainees and 23 female trainees. ■



Wit Hmone Tin Latt

The irresponsible disposal of nondecaying plastic waste leads to waste issues in cities and villages around the country including in the 16 surrounding villages in Mann Field, Minbu. Although the local people would like to solve the problem, they have trouble figuring out where to even begin to address the issue.

MPRL E&P, working with MOGE in partnership in Mann Field, has implemented various efforts related to workplace safety, environmental protection, grievances handling, and addressing the basic needs of the communities such as drinking water, occupational training, sanitation and more.

MPRL E&P also organizes talks to disseminate the message that not only is personal hygiene important, but it is also crucial to keep houses, workplaces, roads and public places free from waste to maintain cleanliness and wellbeing of individuals and communities. Although it seems that waste is a minor issue, it is not a simple task to eradicate the issue through a single action. The problem of waste needs repeated action taken by individuals, families and communities to collect the waste that was discarded recklessly and to educate the effects of waste on the environment and on people. Only in this way, will it be possible to reduce waste and to promote clean communities in the future. In making efforts to remove waste, regardless of occupation, race, residence, religion or political affiliation, everyone can take initiatives to organize together as volunteers.

MPRL E&P's CSR team contacted Trash Hero Myanmar and organized Trash Hero Minbu. Community volunteers recruited trash heroes from their respective villages and 663 trash heroes came together for the Trash Hero Minbu event. Through the event, trash heroes will be able to dedicate some of their time for community work, to collaborate with other communities and encourage other people to join together in the long run. It is hoped that Trash Hero Minbu will cover the whole area of Minbu in accordance with its name.

In the pilot stage, the lead organizers of Trash Hero Minbu are formed with volunteer representatives from the surrounding villages. The advisory group of Trash Hero Minbu is formed with representatives from Trash Hero Myanmar and the CSR team from MPRL E&P.

The Trash Hero Minbu event kicked off on 6<sup>th</sup> September and the opening event was attended by the Minbu Region Minister of the Ministry of Labor, Immigration and Population, U Nay Myo Kyaw, Minbu Amyothar Hluttaw Representative, U Tin Aung Htun, Minbu Amyothar Hluttaw Representative, U Nyi Nyi Win, Minbu Township Administrators, officials, MOGE Mann Field, MPRL E&P and the actual trash heroes themselves.

The total amount of trash collected in the surrounding villages and within the Mann Field area on the 6<sup>th</sup> and 7<sup>th</sup> of September amounted to 1,660 kilograms of mostly plastic waste which was dumped in designated land fill areas. Thanks to all the organizers, volunteers, officials and trash heroes, Trash Hero Minbu made a vow to continue its efforts for its community! ■

Anyone can be a Trash Hero.  
*We Clean. We Educate. We Change.*



# Trash Hero Minbu



## From Front Page ►

landslides or rivers towards and within the sea, or lakes if it is inside a continent.



"The movement of continental plates"? Yes, continents move, not at a cracking pace, but they do move; they collide and create mountain ranges, they split apart and create basins which may even turn into oceans. A very classical telltale of these movements is how the coastline of South America fits the coastline of Africa (Figure 1). **Fig.1: Latin America 80 Million years ago started to split from Africa**, creating vast petroleum-bearing sedimentary basins along the way in Brazil and in central West Africa. The continents are now some 3,000 km apart, and are still moving away from each other at about 1 cm per year (that is 10 km in one million years).

Myanmar is located on a complex jigsaw puzzle of these continental plates, beneath which the India Plate to the West in the Bay of Bengal is threading its way towards China at about 3 meters during the average lifetime of a Myanmar citizen.

The very peculiar crab-like movement of the India Plate beneath the Myanmar Micro-plates is creating both mountain ranges such as the Rakhine Yoma and the Chin Hills, as well as basins, such as the Central Myanmar Basin in the middle of which Mount Popa, among other volcanoes, erupted one or two million years ago, and where Mann Field managed by MPRL E&P is located. During your lifetime, you will have witnessed several earthquakes, hopefully benign, which are the hints of this continuous movement.

Of interest to us in this issue is the West Ayeyarwaddy Basin, the sedimentary basin which received the sediments of the Ayeyarwaddy River before the very recent folding episode of the Rakhine Yoma ridges closed its course towards the Bay of Bengal. This basin lies above the crab-like collision zone of the India plate moving north-eastwards beneath the Rakhine Yoma and Chin Hills ridges towards Assam (Figure 2).

It is important to understand the history of basins in the context of moving continental plates. How are they filled with sediments? Rivers do not carry only water. Depending on the strength of their current, they carry massive amounts of sands and clays, which give this milk tea color to the Ayeyarwaddy River and its tributaries like the Yangon River.

The amount of sediments brought to the sea by the Ayeyarwaddy River is enough to cover the whole of Yangon City under one meter of sediments every four years. If we translate this

figure into a more geologically meaningful time-frame, the Ayeyarwaddy River has transported enough sands and clays to cover the whole northern half of the Andaman Sea under half a kilometer of sediments in the last million years alone. Now that many Chinese and African large rivers have been dammed, the Ayeyarwaddy River has become the third largest transporter of sand and clays to the sea in the world after the Amazon River in South America and the Ganges-Brahmaputra rivers feeding the largest submarine fan in the world, the Bengal Fan extending more than 3,000 km offshore.

#### What did we know of the West Ayeyarwaddy Basin before MPRL E&P worked on Block A-6?

The answer holds in two words: "very little". Only two wells had been drilled in the area back in the 1970's, but none drilled in Block A-6. As you remember one of the four ingredients to find petroleum is reservoirs, in our case sandstones. Of these two wells, one in Block A-5 north of Block A-6, discovered almost no sands, while the well drilled south of Block A-6 in Block A-7, discovered a substantial amount of fine-grained sands towards the top of the well, however very shallow and with very little clays to seal any gas.

A MOGE geological report back in the late 1970's wrote in a review on the potential of the offshore Myanmar blocks of the Bay of Bengal, after the wells were drilled, that "**Block A-6 is evidently the least prospective block on account of lack of adequate trapping mechanism and thin sedimentary cover above the acoustic basement.**" Even for Block A-7, MOGE's verdict of the time was that "reservoir rock potential (i.e. sandstones) is again a severe problem in Block A-7 ...."

Meanwhile, since Blocks A-5 and A-7 were al-

ready licensed at the time, MPRL E&P had no choice but to sign PSC for the only available Block A-6 for which absolutely no party had applied for.

#### What did MPRL E&P actually discover?

Offshore Block A-6 was an entirely new challenge to MPRL E&P; there were very few data, and no wells drilled in the block; all ingredients of petroleum plays had to be identified before embarking in acquiring new data to plug our holes in knowledge, to narrow the risks, and the uncertainties of finding new petroleum.

**Literature Review:** Before the end of 2007, barely a few months after signing of the PSC with MOGE for Block A-6, MPRL E&P had compiled all existing literature covering the area and drawn a number of conclusions. A presentation to MOGE in September 2007 included a slide on "potential reservoirs", where one of the ideas (remember "Petroleum is first found in the Mind") was the deposition in shallow waters during Pliocene of "Paleo-Ayeyarwaddy River Sediments along NE-SW striking transform Faults". A seed was planted, which took some time to germinate. The deep waters then were still thought to be occupied by faraway submarine channels descending from the Bengal Fan.

**Field Work:** MPRL E&P embarked into field work along the coast from Sittwe to Cape Negrais, and even beyond, along the coast of the Ayeyarwaddy Delta. The objective of these field trips (four in total in 2007-2009, plus one in 2014) were to identify all the ingredients of petroleum plays. This was successfully accomplished, but no Pliocene Sediments were found because the area had been severely deformed and uplifted in the last one million years alone, and any Pliocene sediments removed by erosion.



**Fig. 2: A Very Simplified History of the Ongoing Collision between India and SE Asia; the yellow star is the approximate location of Block A-6; the yellow arrow shows India Plate's movements towards and beneath SE Asia and Myanmar (MM) plates; Note how you could have walked from Thailand to Borneo between 30 and until about 5 million years ago (this morning for us geo-nerds).**

**Old Seismic:** Meanwhile, the old seismic lines that had been acquired and recorded 30 years before the signing of the block were reprocessed in an attempt to attain more information through the noisy information. A few of these old lines extended in deep waters, but too sparse and of poor quality to extract unambiguous geological information, to identify sandstones and their source.

**New 2D and 3D Seismic:** Guided by the above work, MPRL E&P embarked in 2009 in the acquisition of a grid of 2D seismic, including in ultra deep waters. While acquiring seismic in ultra deep waters, the company knew it would never have the means to solely risk and drill alone in such deep waters. But MPRL E&P had the vision that this 2D seismic would show hints of deep waters potential, and accelerate future exploration. This campaign was promptly followed by 3D seismic on the most promising shallow waters in 2010. And sure enough, evidence of submarine channeling flowing?? from the East to West could be seen and interpreted, such as the one indicated by our Technical Manager U Ko Ko in his Master's Degree thesis in 2011 (Fig. 3).

The seed which was planted in 2007 now starts to germinate: the idea is confirmed by facts; Pliocene Channels descend from the East to West and feed sediments into mini-basins of the shallow waters of Block A-6. Furthermore, contrasted seismic signals hint at contrasted rock deposits such as alternations of sands and clays.

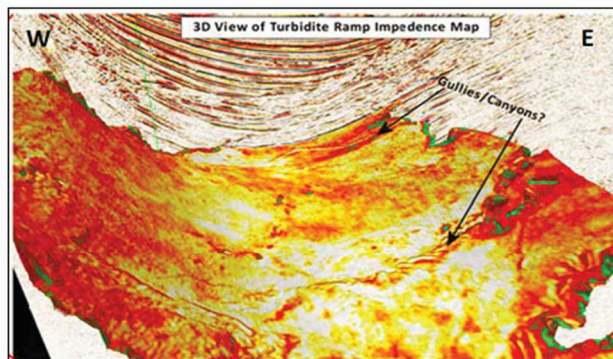


Fig. 3: Gullies and Canyons descending from the East into Pliocene Mini-basins of the Shallow Waters of Block A-6 (U Ko Ko, M.Sc. Thesis 2011)

"Hint" is the word: nothing short of drilling through these deposits could materialize these sands in our hands. However, while looking for funds to drill in these waters, MPRL E&P was repeatedly told by would-be investors, quite a few from reputable international oil companies, declaring that "there cannot be any sands in these waters. How could sands flow across the Rakhine Yoma Hills?". Indeed nobody could see at the time how significant amounts of sands could come from the East across the Rakhine Yoma Ridges. These gullies and canyons would just be local rivulets from these ridges.

**Pyi Thar-1 and its Geological Sidetrack:** MPRL E&P's Corporate Management, with full trust and confidence in its geo-nerds against the pundits from the majors, invested 100% of its own money into giving a try on a structure that showed half a dozen "flat spots", a seismic tell-tale of potential gas lying on water, filling the pores of sands. The decision was taken in 2011, still very much in a climate of sanctions, when the latest technology in terms of drilling and es-

pecially logging (recording electric, radiometric and acoustic properties of the rock and its fluids) could not be made available for application in Myanmar. The result was beyond expectations: the sidetrack well drilled through 62 meters of sandstones and clays, more than 50 % of which were eventually sands, and the top 20 meters, including 6 meters of clean sands, were gas-bearing. All depths are true vertical depths, i.e. compensated for the obliquity of the sidetrack. The germinated seed has now grown to bear flowers. It became clear that significant amount of sands were coming from the East, and the only system that could bring such amount of sands was the Ayeyarwaddy River.



Fig. 4: KNOC's Doosung Semi-sub Drilling Rig used to drill Well Pyi Thar-1 and its Geological Sidetrack

**Where are we now?**

The rest is history; the Pyi Thar-1 discovery brought Woodside as a partner. The JV then acquired the first exploratory 3D seismic in the ultra deep waters of the West Ayeyarwaddy Basin, followed by Total which completed the partnership that led to the gas discoveries of Shwe Yee Htun-1 and Pyi Thit-1 in channels having transported significant

amounts of sands from an ancient Ayeyarwaddy River. Worth noting that MPRL E&P had already mapped on its 2D survey a vast closure, a

potential gas trap, known at the time as DW-1, a potential trap, later called Saung, where channels could be seen and which immediately focused the location of the first ultra deep-water exploration 3D seismic survey in the country.

But how do rivers cross mountains? They do not of course; the mountains were simply not there, the hills that you cross to go to Ngwe Saung and Chaungtha simply did not exist; instead of the roads that lead to your preferred beaches, the landscape was occupied until one million years ago by the Patheingyi River, which now runs towards South. Indeed between two and one million years ago, a series of commotions marked the divorce of the India Plate from the Myanmar Micro-plates, which for some five million years had joined to move along the SE Asia Plate.

Among these catastrophic events, you can list:

- the rise of the Rakhine Yoma Hills to the point of closing access to the Bay of Bengal to the Patheingyi River now running South to the Andaman Sea,
- the eruptions of Mount Popa and Kyaukpadaung Volcanoes,
- the uplift of all the oil and gas fields from Letpando to Shwe pyithar including Mann,

Pyay and Myanaung along a 300-km long fracture zone, possibly the boundary of one of the Myanmar Micro-plates,

- the capture of the Ayeyarwaddy River which abandoned the course of the Sittaung River near Mandalay to join the Chindwin River, and more recently
- all the dramatic earthquakes recorded in the last thousand years or two, and still continuing. A continental plate does not stop as a freighter in a harbour.

At present, MPRL E&P is still at work to look for more evidence of this Paleo-Ayeyarwaddy River especially on this side of the Rakhine-Yoma Hills: our colleague geologist U Kyaw Zin Oo has recently presented to the Myanmar Geological So-

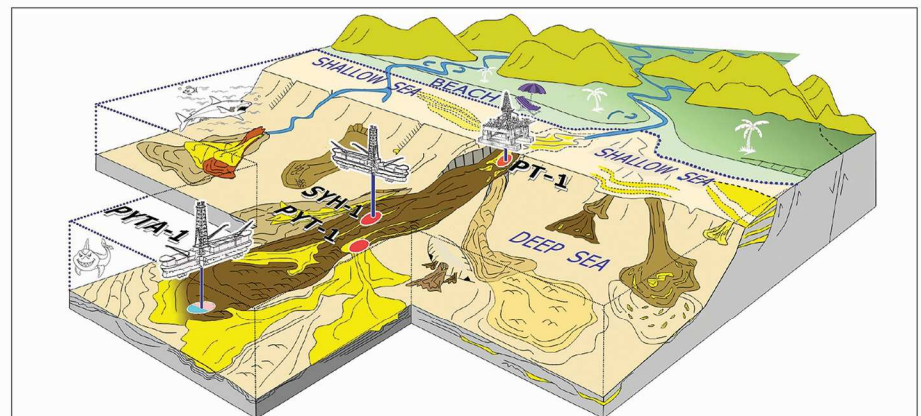


Fig. 5: A Block-Diagram of the Paleolandscape at Miocene-Pliocene (20-2 Million Years Ago) in Block A-6, with the approximate locations of the gas discoveries in the block: PT- 1 = Pyi Thar-1, SYH-1 = Shwe Yee Htun-1, PYT-1 = Pyi Thit-1 and the gas shows in PYTA-1 = Pyi Tharyar-1

ciety a paper including observations on the direction of rivers of the Ayeyarwaddy Delta some 2 to 5 million years ago. The work is still in progress, but show very good promises of confirming the old landscape unearthed solely by the Geological Team of MPRL E&P.

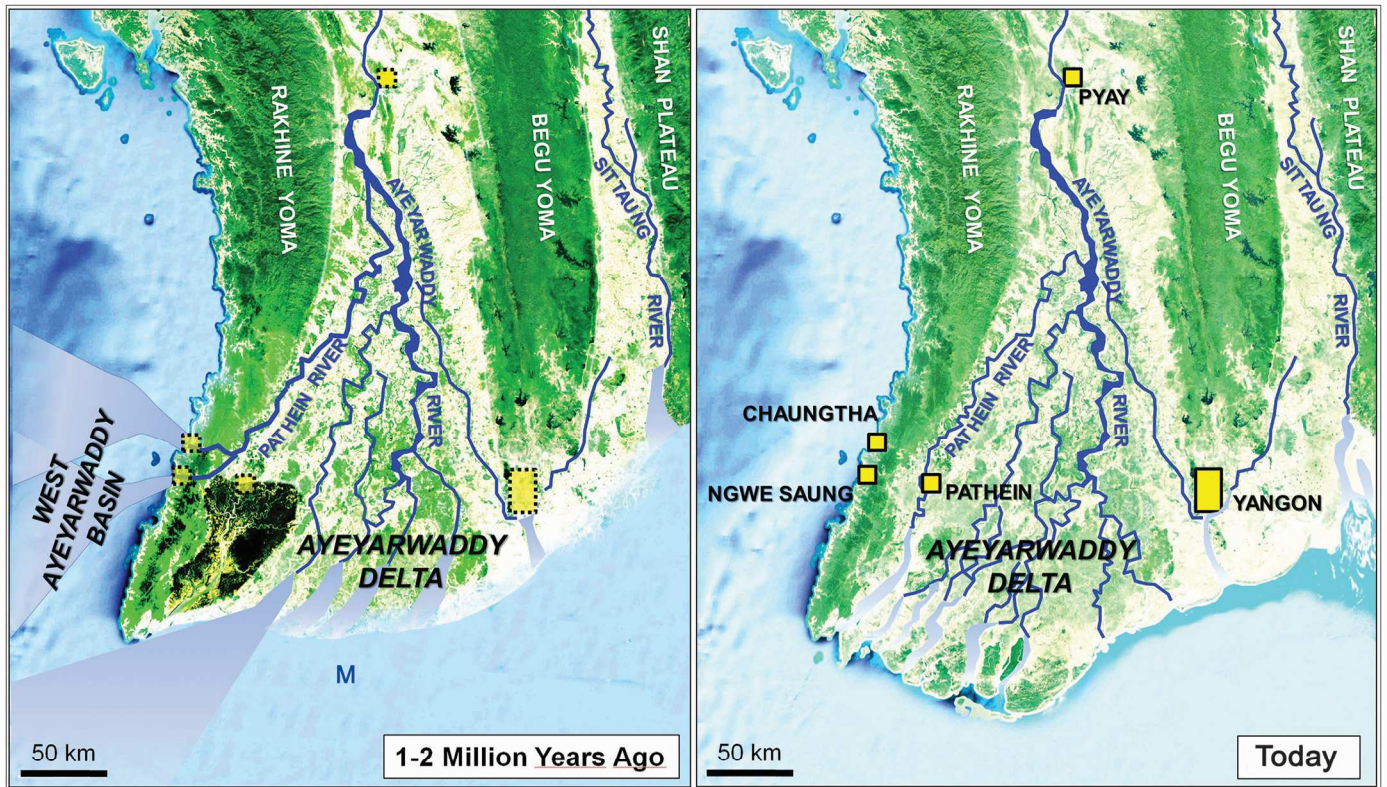


Fig. 6: The Course of the Ayeyarwaddy River System 1-2 Million Years Ago vs Today as uncovered by the measurement of the flow direction of old rivers (U Kyaw Zin Oo, 2017, and work in progress), the surface gravimetric and geological maps. Gravimetry or the measurement of tiny differences in the weight of one liter of water from one place to the other, allows to map buried eroded hills and mountains.

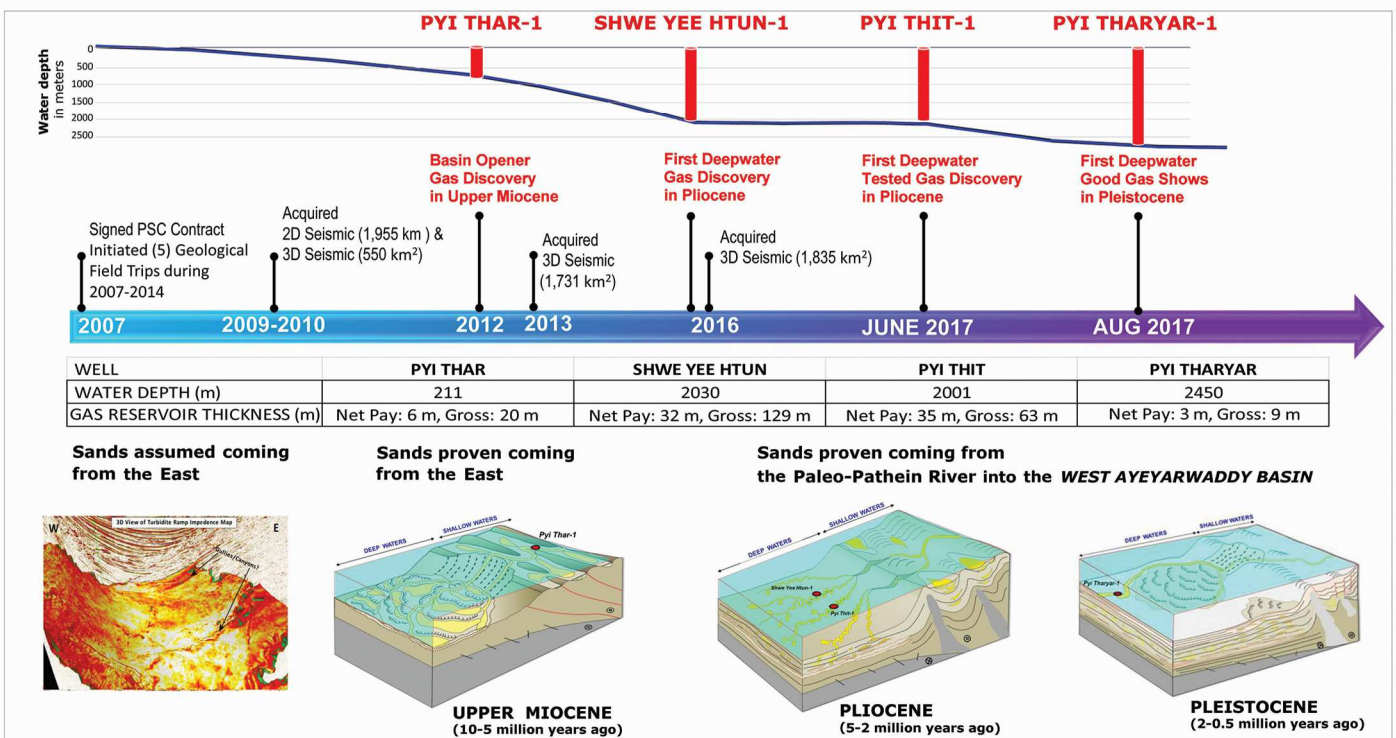


Fig. 7: The Exploration History of MPRL E&P in Offshore Block A-6: the maturation of a concept into a fully-fledged Paleo-Landscape

In conclusion, the above Figure-7 summarizes how an idea fed a pioneering discovery, which attracted investments that allowed the acquisition of more data to drill more discoveries, and adding ever more details to reconstruct a five-million years old landscape. ■

# Who's Who at MPRL E&P?

## Administration & Contracts Department

Please introduce your department including when it was founded, what are its roles and responsibilities, and its team members:

Our Department was founded since the beginning of the Mann Field Incremental Production Enhancement Project in 1996. We are one of the main business support units in the proper running of our organization in every aspects. Administrative support start from basic needs to critical issues in the long term operation of our organization. MPRL E&P has reached quite a long journey at this time, and have managed to solve all administrative and management functions in a timely and successful manner. From its establishment, and while continuing to expand and grow as an organization, even before our Human Resources Department was formally set-up in 2013, our department operated with our own performance management system, tackled all HR related issues, staff welfare, transport arrangements in a supporting role to meet all objectives of the entire organization. Subsequently, many of these activities had been handed over to our HR Department as we further expanded with the addition of contracts function.

We are currently managing all of the tendering and contracting processes for both local and international service providers, suppliers and manufacturers. In order to fulfill such job requirements, we collaborate with various technical departments as well as with all business support departments such as Compliance, Material & Logistics, Finance Department, Internal Audit, etc.

Disciplinary management is one of our key duties and responsibilities in order to drive the organization smoothly and efficiently. For this concerns, we can summarize what we are executing in line with our management guidance as follows. The key to successful disciplinary management is process. Alleged offences must be investigated correctly and ethically. Meetings must be called in a timely manner, with the right language used in communications (mostly English since some of our multi-national expats are included). Meetings must be run exactly right. The organization's systems and procedures must be strictly adhered to. Procedures must comply with current employment laws, regulations and codes of conduct. We also have to ascertain that all staff wear their uniforms neat and tidy including grooming. We support and keep all staff abreast throughout the organization so that Corporate Management's instructions and guidelines are properly and adequately trickle down the ladder. Failure in any aspect places the firm at risk of potential claims by the employees and financial compensation payable to the detriment of the organization. Such activities require us to cooperate closely with the HR Department in order for us to achieve our goals.

The other key function of our department is investigation. It is one of the most critical aspects of disciplinary management. Investigation is generally best done by another manager or employee from a different department outside of the unit that is directly involved – use of private investigators or solicitors would likely be viewed as heavy-handed. In this regard, we need to implement in close cooperation with HR personnel to support an in-house investigator or an investigative party.

The role of Administration & Contracts Department within an organization is categorized as:

- Manage all office administrative issues through a team of administration staff to provide a range of facilities and services for the Yangon and Field offices, in an efficient and cost-effective basis



- Lead a team of contract staff to ensure all contracts / tender related processes to be in an efficient and cost-effective manner

Some of the main functions are collectively expressed as follows:

- As a working body of the team, the effective efforts must include close monitoring, reviewing and readjustments to reduce the administrative budget and expenditures in order to meet the corporate main goal of Return on Investment (ROI target)
- Negotiate with travel & logistic providers in terms of attaining competitive prices for the convenient travel and accommodation for all employees from staff level to corporate executives traveling on both local and international business trips such as meetings, conferences, workshops, trainings, etc.
- Manage office maintenance, monitor effective usage of office supplies, and to maintain tidiness & cleanliness of the work environment
- Supporting, tracking, reviewing with regard to maintenance of the company's vehicles, monitoring of their movements, security, telephone, scrutiny and passing of bills of staff benefits, bills for hired cars, staff allowances, etc. including feedback to the team members in order to evaluate the performances
- Looking after internal communications so that all members of the organization are aware of what is going on within the organization as well as periodically update changing circumstances
- Organizing any deliveries or suppliers coming into the offices not to have any potential delays to support the requirements of other business units in the Group of Companies
- Prepare and review contracts for the purchase, or rental of materials and services. Contract professionals are to analyze bids and proposals, to ensure that the specifications of contracts and agreements with customers, vendors, and employees are legal and in compliance with company policy
- Build up and maintain relationships with service providers in order to maintain and enhance the quality of their services, and strictly follow terms & conditions of the contracts in accordance with industry standards

Team members of the Administration & Contracts Department are:

- |                       |                            |
|-----------------------|----------------------------|
| 1. Daw Thandar Lin    | Sr. Administration Officer |
| 2. Daw Zaw Zaw Htoo   | Admin. Coordinator         |
| 3. U Khin Maung Lwin  | Sr. Admin. Assistant       |
| 4. Daw Hla Yin Nyein  | Sr. Admin. Assistant       |
| 5. Daw Meme Pyone     | Receptionist               |
| 6. Daw Hsu Sandi Zeya | Receptionist               |
| 7. Daw Khana          | Cleaner                    |
| 8. Naw Htar Nwe Aye   | Cleaner                    |
| 9. Nan Aye Aye San    | Cleaner                    |
| 10. Naw Wah Phaw      | Cleaner                    |



**Rig Visit Gas Discovery Ceremony at**



**Well Pyi Thit-1 ( Offshore Block A-6 )**



# MPRL E&P Hosted a Town Hall Meeting

at Their Yangon Headquarters





Thal Sandy Tun

A town hall meeting which gives employees a chance to directly engage with members of the Senior Management was held on 15th September. In addition to staff from the MPRL E&P offices in Yangon, those from M&A Telecommunications Limited, Building Management Office (Vantage Tower) and M&A Offshore Supply Base Limited joined the meeting. Before the question and answer session began, a 15-year service award ceremony was held to celebrate the commitment and dedication of 8 staff from Mann Field.

Chief Executive Officer, U Moe Myint, greeted the audience and explained about the origin of town hall meetings. Town hall meetings originated in the United States where people gathered to discuss matters related to their villages, cities and communities. Later businesses adopted the tradition whereby such meetings were held for executives to engage their staff. MPRL E&P is the only company among the group of companies to hold such a meeting starting from last year. CEO emphasized that the objective of the town hall meetings is so that all staff are aware of what is happening across the business, what is being done, and the direction the group of companies are headed toward. He encouraged all staff to take the opportunity to ask Senior Management questions openly and constructively during the meeting.

Then the Q&A session began. Some of them are highlighted below.

Regarding a question about pre-requisites for achieving corporate goals for the fiscal year, Country Manager U Sithu Moe Myint explained that the first corporate goal for this fiscal year is to obtain 30% Return on Investment (ROI). Two aspects are important to achieve this goal. The first is to reach targeted production and the second is to keep expenses within or under budget. By the mid-year mark, the production target is unfortunately lagging behind and three deepening work programs have been executed in Mann Field. Concerning the expenses, MPRL E&P have kept expenses tightly within budget except one month.

Country Manager continued that the second corporate goal is ensuring sustainable business operations for which HSE and CSR performance are indispensable. Oil and gas projects can last between 15 and 20 years, or sometimes 25 years, while the tenure of a government in Myanmar is only 5 years. Therefore, the business needs to strategize for long term from the beginning until the end of the project. He then praised about the recent HSE and CSR initiatives in Mann Field. With regard to the third corporate goal, there is a need to develop the workforce to strengthen the organizational capacity. Myanmar government is preparing a policy to further develop local talent and MPRL E&P is also planning to roll out a formalized mentorship program to further develop its staff.

When being asked about recent developments in Offshore Block A-6, Country Manager excitedly shared the latest news about the block. MPRL E&P has been working on the block for about a decade but it is still far from production stage. During the latest appraisal drilling campaign, two wells were drilled. An additional three to five appraisal wells are being planned in the block. According to the current PSC terms and conditions, the government takes a high percentage, as a result of which the company needs to drill more wells to reach a commercial threshold. Therefore, Offshore Block A-6 is expected to produce the first gas within the next six to seven years. CEO commented that the country's leaders show much interest in the block which has a 75 % success rate and the country urgently needs to fulfill its growing energy demand to fast-develop the economy. It was mentioned that if the commercial threshold could be reduced, the first gas is likely to come online within four years.

Responding to a question about possible benefits that M&AOSB will bring to the local economy and to the country, Group General Manager, U Myo Tin, said that the construction of the offshore supply base has not started as yet but a number of local people have been employed as a result of early activities such as building a staff quarter. Contractors hired to execute technical studies have also hired local labor and survey boats. Therefore, even before the project is started, local communities have gotten job opportunities and gained income. When the project is in construction stage, majority of workforce will be from local area. When the project is in operation, a significant number of locals will be employed. Therefore, because of this project, the Nga Yoke Kaung local communities will have better income and better knowledge, thus better lives.

CEO added that currently, offshore supply vessels bring necessary supplies to Offshore Block A-6 via Singapore or Ranong. The day rate of a drill ship is over USD 350,000 per day and supply vessels need about ten days (round trips) to go to and from Singapore. Therefore, the cost of logistics is enormous. When M&AOSB is in operation, drilling activities can get logistic support within 24 hours. In addition, other countries benefit from operations in Myanmar waters. If the M&AOSB can provide these services following approval and support from the government, it will be Myanmar reaping benefits. Thus, M&AOSB is believed to be a necessary infrastructure for the country's economic development.

Other questions raised included Senior Management's plan for knowledge and technical transfer within the company, training opportunities for staff members, how MPRL E&P mentorship program will be further implemented, changes with regard to medical benefit policy, benefits differences between MPRL E&P and its sister companies, promotion and pay raise, upgrading facilities such as cabins and vehicles in Mann Field, and staff motivation initiatives. In addition to CEO, Group General Manager and Country Manager, Executive Director U Tint Swe and Chief Compliance Officer Daw Nu Nu Lwin provided responses.

The meeting concluded at 5 p.m. and refreshments were served. ■





CEO & His Family's  
Meritorious Deeds on *Birthdays*



MPRL E&P Group of Companies

# Why and How Do We Test a Discovery Well? Why Do We Flare the Produced Gas?

Dr. Eloi Dolivo

Testing is an essential step of assessing the commerciality of a petroleum discovery. Testing operations attempt to answer two questions:

- What is the maximum flow of petroleum that one well can produce? Is it commercial?
- How much petroleum can a single well drain during its life as a producer?

## The Pyi Thit-1 Well Case

Let us consider the Pyi Thit-1 gas discovery. The answers to these two questions are crucial when deciding whether this gas discovery in a noodle-shaped sand-filled deep water channel has the potential of becoming a commercial gas field.

To answer the above two questions, we need to monitor two physical characteristics of the gas reservoir during the test:

- the gas flow,
- the reservoir pressure

Figure 1 shows a very schematic image of the well during the test, including:

- The gas flow is measured at the derrick floor, at a special valve after the gas separators, which separate the gas from any produced liquids
- The reservoir pressure is measured by gauges located as near as possible to the perforated reservoir

A full week was necessary to prepare this test, known in the industry as Drill Stem Test (or DST), because the test was performed by using the drill string and equipment available on the drill-ship.

## The Pyi Thit-1 Well Test

Figure 2 shows the various phases of the test, i.e. the perforation followed by a clean-up phase, the flow test phase and the pressure build-up phase.

The first phase is still, in a way, a part of the preparation to test, but already gives a preliminary view of the quality of the reservoir. The flowing and the pressure build-up phases are the proper test to answer the two questions in the introduction.

## Clean up Phase

The well was first filled with light oil to replace heavy brine that filled the well during the preparation for testing. This brine was stored for "killing" the well at the end of the test, i.e. putting pressure back to the gas reservoir to contain it before cementing the well. The light oil is to establish a low pressure environment in the well: this light oil is to be easily pushed by the surging gas after perforation and opening the well.

The well was perforated at just before noon on the 30th of July, by explosive shaped charges which need to blast the casing and the cement

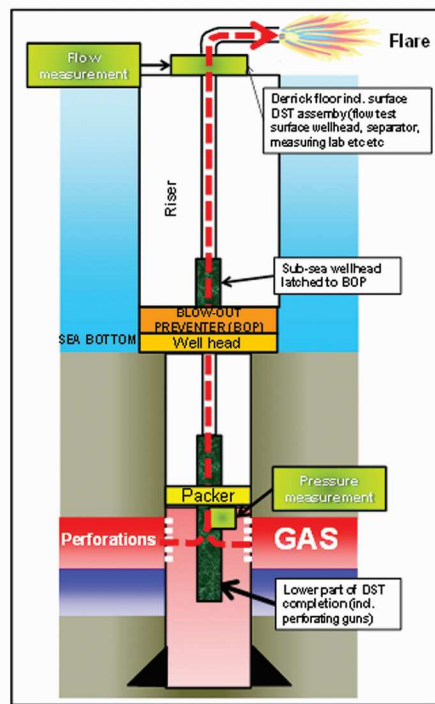


Fig. 1: A very simple view of the testing completion of Pyi Thit-1

behind the casing to reach inside the gas bearing gas sandstones.

The initial flow of gas first pushed the light oil that filled the well and finally reached up to the separators and various gauges and to the burners to be flared. After making sure that the gas was now flowing free, the well was closed for settling the debris of the perforations to the bottom of the well and to record the virgin pressure of the reservoir as a reference. The well was then opened again for cleaning up and closed again to observe the reservoir pressure.

## Flow Test Phase

This phase was to answer the question: At which flow rate could the well produce gas sustainably?

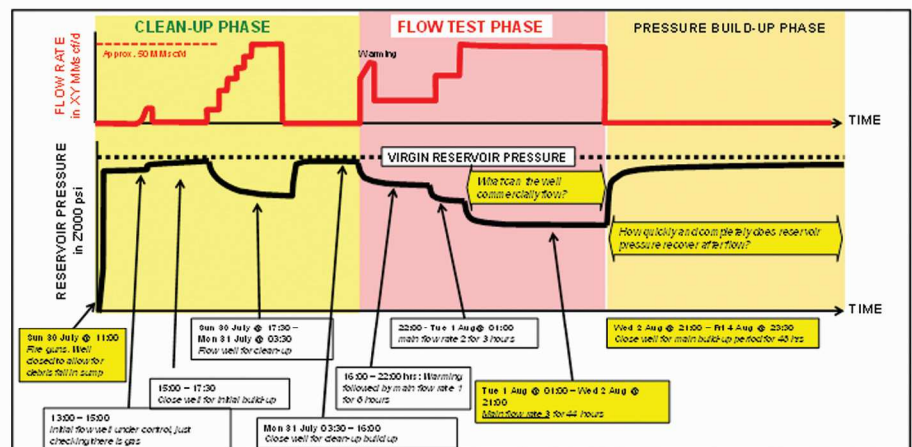


Fig. 2: An idealised theoretical view of test phases. Time is not scaled for the sake of clearly showing the various phases, including when the main questions are (hopefully) answered.

The production of gas through the perforations of the reservoir creates a depression behind the perforations which produce the gas. The reservoir pressure decreases and is monitored as the flowing pressure; the difference between the virgin pressure and the flowing pressure is called the drawdown pressure.

The Pyi Thit-1 well was open for the main flow period, which started with a warming phase followed by two short phases whereby different sizes chokes, or adjustable valves, were used to limit the flow of the well. The behaviour of the flow rate and of the drawdown determined which choke was to be applied during the main flow phase. This particular choke was to restrict the flow of the gas so that the testing installations of the well and of the drill-ship can handle such flow. The main flow phase of the Pyi Thit-1 test lasted for around two days.



Fig. 3: A view of the drill-ship flaring gas

Two pieces of good news emerged from this phase:

- (1) the flow of gas had to be constrained to 50 million cubic feet of gas per day (MMscf/d), about the daily gas consumption of the city

of Mandalay, because of the testing installations of the drill-ship could only handle this maximum flow rate.

(2) as the gas-filled reservoir flowed, a minimum drawdown was observed. This drawdown very rapidly remained nearly stable. In other words, a lot of gas was "pushing behind" to replace the produced gas.

### Pressure Build-up Phase

This last phase of testing was to answer the question: How far can this well drain gas? How much gas could be sustainably produced from a well like Pyi Thit-1 during the life of the gas field?

We closed the well - no more gas was flared - and we observed how fast and how close to the virgin pressure the reservoir pressure recovered after closure. The faster and the closer the reservoir pressure nears the virgin pressure, the most likely the well is reaching further into the reservoir. The good piece of news for Pyi Thit-1 was that the drawdown pressure decreased very rapidly and the reservoir pressure recovered very quickly. Future producers will drain large amounts of gas during their life, and therefore less producer wells will have to be drilled to drain larger volumes, an essential indicator of good commerciality, that MPRL E&P's reservoir engineers are now estimating. A lot of work remains to be done to fully analyse and understand this test, but the initial evaluation points to the likely outcome of a good commercial test.

### Why Do We Flare the Gas, rather than Collecting it?

If readers are wondering if this gas could be brought onshore, bringing gas onshore involves laying pipes starting from high-pressured sub-sea wellheads, sometimes across the rugged sea-bottom which needs to be carefully surveyed. Bringing the tested gas onshore is simply not a commercial option. It is comparable to fishing one single hilsa fish some 50 miles out at sea and using a large industrial fishing vessel to bring it offshore.

"But why not use this gas to power the drill-ship?" you might wonder! "Natural gas is much cleaner than marine diesel!" A smart idea indeed, but as of October 2016, only 86 ships in the whole world apart from Liquefied Natural Gas (LNG) carriers, were sailing on gas (ref. 1).

LNG-powered vessels are a new technology developed ahead of the new norms of the law of the seas to combat diesel fuel pollution. Before it powers the ship, the gas must be stored on board as Liquid Natural Gas (LNG) and producing LNG involves liquefying gas and chilling it to liquid at temperatures of minus 162°C, so that 600 cubic feet of natural gas occupies only one cubic foot of liquid gas. Such an industrial process is almost always conducted on land due to the sheer size of the plant and only in the last three years have we seen a few Floating Liquefied Natural Gas plants starting operations on giant gas fields in SE Asia, where the thirstiest gas markets in the world are located.

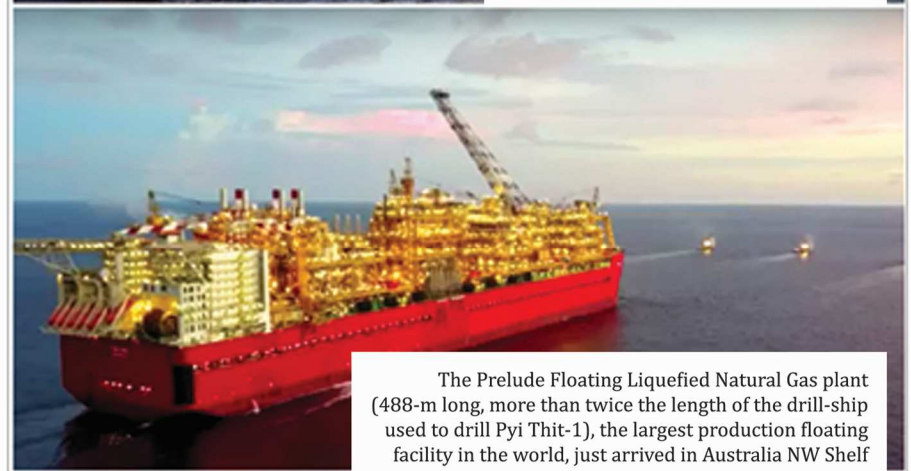
Interestingly, even LNG carriers have dual-fuel engines, mostly running on diesel fuel, and using the "boil-off" gas of their LNG tanks to burn along the diesel. The boil-off gas is the gas that



LNG carrier



The First LNG-powered passenger vessel launched in Finland (Europe) in 2013 (218-m long / 2,800 passengers);



The Prelude Floating Liquefied Natural Gas plant (488-m long, more than twice the length of the drill-ship used to drill Pyi Thit-1), the largest production floating facility in the world, just arrived in Australia NW Shelf

Fig. 4: LNG-powered vessels

inevitably evaporates from the liquid gas tanks of the LNG carriers as it sloshes around in the seas.

In conclusion, around one third of a day of Myanmar's gas consumption was produced during two days of testing, which is the minimum amount to answer the above questions on gas commerciality of Pyi Thit-1. As of now, as accepted by the most stringent legislations in the world such as in Norway, there is no alternative to flare gas testing of the commerciality of a gas accumulation. However, test designs are very carefully crafted to gather a maximum of data in a minimum amount of time on associated gas flaring and if any money were to be made from an alternative to flare gas, it would be in operation instead. ■

Ref. 1: <http://www.motorship.com/news101/lng/lng-fuelled-fleet-update>

Ref. 2: <https://www.statista.com/statistics/264024/number-of-merchant-ships-worldwide-by-type>

# 26 Days with 50 DRR Leaders from ASEAN

May Zaw Htet



It was a great experience to be able to participate as one of the delegates from Myanmar in the ASEAN Youth Program in the area of the Disaster Risk Reduction (DRR) in Bandung in the Republic of Indonesia. The event was developed and implemented by Universiti Kebangsaan Malaysia (The National University of Malaysia - UKM) with the support of the ASEAN Secretariat, Malaysian Ministry of Youth and Sports, and the U.S. Agency for International Development (USAID), in collaboration with Institut Teknologi Bandung (Bandung Institute of Technology - ITB). The 26 days of the event have been the most well-spent days of my life in terms of learning, sharing, caring and food exploration.

The ASEAN Youth Volunteer Program was initiated in 2013 with the intention of supporting the Master Plan on ASEAN Connectivity and promoting regional integration by enabling youth to participate in volunteer opportunities that build awareness about regional challenges. Universiti Kebangsaan Malaysia hosts and manages the program in collaboration with the Malaysian Ministry of Youth and Sports, which also provides the financial support. The program works with various local partners to implement each of the in-country projects.

## Bandung aka Parijs van Java (The Paris of Java)

Metropolitan, yet full of memorable colonial buildings, such as the building which hosted the first Asian-African Conference, Bandung, the capital of West Java is one of the most beautiful cities in Indonesia. The city itself lies on a river basin surrounded by volcanoes, but unfortunately it also for this reason that the program selected the city as the venue due to the high risk of natural disasters, especially because of its proximity to the active Lembang Fault. The Fault could potentially trigger up to a magnitude 7 earthquake, and could impact people living in the Bandung basin and its surrounding area.

## Skills Enhancement

A series of workshops were conducted to ensure all volunteers were well-equipped with necessary skills such as the Community Based Disaster Risk Reduction and Management (CBDRM) approaches, Disaster Risk Reduction and Resilience Building, Safe School and Disaster Education, Earthquake Hazard and Earthquake Induced Landslide, Basic Disaster Preparedness and Response, Gender and Vulnerable Groups, Religious Beliefs and Disasters, ASEAN region and Local DRRM context.

Study tours were part of the program to promote exposure and site visits to Disaster Resilient Village, Chikahuripan village, allowed us to learn about how the community quickly responds to natural disasters and their preparedness for any emergencies. The Geotour to Lembang Fault also allowed us to learn about the field research on tectonic geomorphology, and studies about the recurrence interval and the timing of recent faulting events.

## Community Engagement

After continuous capacity building classes for two weeks, volunteers were assigned to conduct hands-on engagement activities to complete the CBDRM practices and implement an earthquake drill in each community. The 50 volunteers had to implement two drills in two different communities: Desa Lembang and Kelurahan Cigadung, where ten groups, with 5 participants from each ASEAN country, formed a group and were responsible for designing a complete set of evacuation routes to final destinations.

## Evacuation Drills

One of the D-days of the program, the evacuation drill in Desa Lembang was implemented on the 19<sup>th</sup> of August. The community present included related provincial bodies such as red local youth and women organizations, the Red-cross, fire departments, BNPB, and FKDM, which played an important role. Volunteers performed assigned tasks successfully acting as community volunteers, rescue team leaders, the command center, the medical center and survivors.

## Cultural Exchange

To strengthen the commitment of the ASEAN identity, and enhance cross-cultural understanding, each team had to perform according to their group names of ten ASEAN countries. Although each team performed with different approaches, we felt a sense of being one community and sharing similar cultures after every performance. During the closing ceremony, all volunteers performed traditional Indonesian dances including Saman, which has been recognized by UNESCO as a masterpiece, along with North Sumatra, Sulawesi, Papua, Jakarta, Bali and Poco Poco dances.

## Alumni Project

At the end of the program, each volunteer had to come up with a proposed project to implement in one's own country. It was the highlight of the trip for me as I could see a driven youthful spirit from each person to contribute to their own community. Half of the volunteers had a chance to grab a golden award and will get the chance to compete with others to receive a final prize from the program.

My 26 days were rewarding with the other 49 DRR youth leaders across ASEAN and I believe that each volunteer gained knowledge and unforgettable experiences at this program. We could not help but shed tears at the end of the program, not out of guilt, but because we were too afraid to lose all the good memories created throughout the program under shared commitment to build one resilient community. Thank you AYVP! ■



## Milestones of Ngwe Saung Yacht Club & Resort

Moe Thu Zar Soe

Ngwe Saung Yacht Club & Resort has been awarded the 2017 TripAdvisor's "Certificate of Excellence", the second year in a row the resort has been selected.

TripAdvisor is an American travel website company providing hotel booking as well as reviews of travel-related content. The website services are free to users, who provide most of the content, and the website is supported by a hotel booking facility and an advertising business model.

This achievement has fully manifested NSYC's team's continuous commitment to strive for excellence in premium customer services. It is not only served as proof of customer recognition, but also as great encouragement to motivate staff to attain an even better performance.

Daw Khin Sandar Aye, Director of Sales from NSYC reflected,

"We are grateful for our customers' support and we will continue to make every effort to further enhance our services in our continuous pursuit for service excellence."

A gateway to paradise, Ngwe Saung Yacht Club & Resort, is a full-service resort destination located in the pristine coastline of Ngwe Saung Beach and is where luxury and sailing tradition meet. One can enjoy 600 meters of pristine white sand beach just a stone's throw away from Lover's Island and is only a 5-minute boat ride from there, and a 45-minute drive to Elephant camp.

A variety of activities such as fishing, water sports, snorkeling and excursions by boat, motor bike or mountain bike touring, are among many other exciting and fun activities available at the place.

Ngwe Saung Yacht Club & Resort is the proud recipient of multiple design awards in 2015 including Best Hotel Development, Best Hotel Interior Design, Best Landscape Architecture Design and Best Hotel Architecture Design. In 2016, the resort received the best resort of the year of Myanmar with the recognition for quality excellence in tourism and hospitality in the Mekong Tourism Alliance Countries. In the same year, it was also awarded best customer service by the Ministry of Hotels & Tourism on World Day and was the host for the 27<sup>th</sup> SEA Games sailing competition. ■

## CSR Team Attended UNGC Myanmar Network's Seminar

Thal Sandy Tun

A seminar on the "Role of CSOs in Promoting UN Global Compact" was held in Yangon on the 28<sup>th</sup> of August from 9:00 to 11:00 in the morning, organized by UMFCCI (Union of Myanmar Federation of Chambers of Commerce and Industry), UNGC Myanmar Network and Local Resource Centre. U Zaw Min, Chairman of UMFCCI, and Daw Pansy Tun Thein, Executive Director of Local Resource Centre, delivered their welcoming remarks and opening remarks respectively. U Naing Ngan Lin, Minister for Social Affairs, Yangon Division, also delivered a speech on the role of civil society in the transition period of the country.

Then Professor Dr. Aung Tun Thet, Chairman of UN Global Compact Myanmar Network, discussed the role of civil society organizations in supporting UNGC and businesses for peace. CSOs are encouraged to become members of the UNGC and remain committed to their job of constructively engaging and influencing business decisions while adhering to the UNGC Principles. This is important for national peace and sustainable development as the UNGC Principles covers the areas of human rights, labor, anti-corruption and environment on which both parties should work on alongside the State.

Daw Moe Thu Zar Soe, Communication Officer from MPRL E&P, attended the seminar. She reflected, "The seminar was quite a big one with participation of CSOs across the country as well as businesses like us. The questions raised by the participants were also interesting. I have learned that the UNGC Myanmar Network is aiming to increase UNGC active membership, especially with the addition of more civil society organizations. However, it was warned that it proved to be a challenge for many organizations to submit their COPs in time to remain as active members. As a result, the membership fluctuated, as one attendee pointed out. I am glad to know that the UNGC Myanmar Network is hoping to provide support for the issue."

Myanmar is one of the member countries of the UNGC and there are about 244 Myanmar private businesses registered with this voluntary action until present. As the world's largest corporate sustainability initiative, the UNGC encourages businesses worldwide to implement their strategies and operations in alignment with universal principles on human rights, environment, labor and anti-corruption, and to support UN goals.

MPRL E&P is an active UNGC member and submitted its first Communication on Progress (COP) in February 2017. Its next COP is due in the same month next year. ■



# How Essential is Communication in Safety Culture?

HSE Team

## What is safety culture?

"The safety culture of an organisation is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management. Organisations with a positive safety culture are characterised by communication founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures."

## MPRL E&P's Management Commitment

The active involvement of senior management in the health and safety system is essential. This commitment fosters and enhances motivation and concern for health, safety and environment ("HSE") throughout the organisation. A well-reasoned proportion of resources (time, money, and people) and support allocated to health and safety management and the status given to health and safety versus production, cost etc. is a fair indication of this commitment.

A positive safety culture has three key elements,

1. Working practices and rules for effectively controlling hazards (procedures, safety talks, job safety analyses - JSA, tool box talk - TBT, walkarounds, etc)
2. A positive attitude towards risk management and compliance with the control processes (two-way monitoring by CARE cards, etc)
3. The capacity to learn from accidents, near misses and safety performance indicators and striving for continued improvement with a good system of communication.

## Communicating safety

### Two-Way Communication is essential

A positive safety culture – that is a constructive safety culture that is based on no blaming includes effective channels for top-down, bottom-up and horizontal communication on safety matters.

Blaming culture	Non-Blaming culture
Fault-finding	Fact-finding
Focus on individual	Focus on process
Ask "Who?"	Ask "Why?"
Zero in on function	Look for systems issues
Make assumptions	Determine needs
Blame	Hold accountable
Control	Assist
Inspect/sort	Improve capability

**Top-down Communication:** Effective communication from management to staff is key to providing successful health and safety leadership and fulfilling a zero-Lost Time Incidents / Lost Time Accidents target. This can be achieved through a visible safety policy statement, and newsletters describing safety news, safety issues, health tips, and major accident risks. Such communication is also materialized by well-framed, well-targeted, well-endorsed and well-understood procedures, fit for the job and matching the available tools, equipment, material and means, including protection and mitigation measures.

**Bottom-up Communication:** Communicating a problem or concern is only one step on the route towards a good safety culture. Feedback mechanisms should be in place to respond to the reporter (if required) concerning any actions taken.

**Horizontal Communication:** The organisation should provide a system for the effective transfer of information between individuals, departments and teams. In practice, appropriate safety information should be available when required.

## How can we gauge good communication?

**Good communication between all levels of employee:** questions about health and safety is part of everyday work conversations in a positive culture. Management should actively listen to employees' concerns and suggestions.

Let's discuss the following example as an accident due to failed communication .

### An example of the consequences of poor communication

On 31<sup>st</sup> of May 2017, a loss time accident (LTA) occurred in Mann Field which was entirely preventable if procedures and processes had been strictly followed. As a result of the accident, one MOGE personnel was injured on the nostrils.

Please take a moment to observe the photo of this injured person. Think as if this person was you, your father, your sibling, a relative or a close friend, somebody dear to you, how would you feel?

Let's visit the roots of this accident. Based on the final incident report, the causes include:

1. Inadequate supervision and communication by the pulling unit supervisor.
2. Lack of awareness (not to be mistaken as knowledge or understanding) of pressure.
3. Inadequate identification of hazards and control measures (not captured in JSA).
4. Negligence of supervisor of the equipment which was not working properly.



The above clearly indicates that this accident was preventable. The supervisor could have communicated to the injured person before opening the BOP, as with all other personnel involved.

This demonstrates that safety is a culture, as we should not only practice and promote safety for the sake of statistics, but also because at the end of the day, everyone associated with our operations must return home safe from injury and harm – everyone, every time, everywhere. This includes our MPRL E&P personnel, our colleagues from MOGE, and all of our contractors on site. Statistics are only a monitoring tool to drive improvement in our practices, procedures, and processes – to benchmark our current standards against our targets and to identify weak zones.

**HSE Manager reflected,** "As a leader, I take equal accountability for this accident as a failure in my part to ensure that the right processes and procedures were not followed, and I expect my line management and direct reports to do the same. Rest assured I will be doing everything I can to ensure that this type of accident is not repeated in the future. However, we are all accountable to create and drive a positive safety culture in our entire organization, not just the HSE team. Leadership, at all levels, shall always be accountable and responsible for fostering and maintaining a positive safety culture that all of us are to practice."

### Enforcement and advice

From this accident, we have learnt that supervisors are critical to ensure that all procedures are comprehensively communicated to all operations staff and to ensure that such procedures are fully understood and strictly followed during operations to eliminate 'human error'. Human error is usual and widespread - if you look at aviation accidents, the majority of such accidents are on account of human error, whether from the flying or the ground crew, and are normally because procedures were not strictly administered and followed.

The following actions must continue to be taken to eliminate human error:

- Improve our operational procedures/processes/checklists, Job Safety Analyses ("JSA"), Job Hazard Analyses ("JHA") and Toolbox Talks ("TBT") to better describe every and all actions by the supervisor to ensure that all potential dangers are eliminated and that the operation is performed safely.
- Supervisors to effectively communicate operational procedures/processes/checklists, JSA and TBT to

all concerned operational staff and entire crews prior to execution.

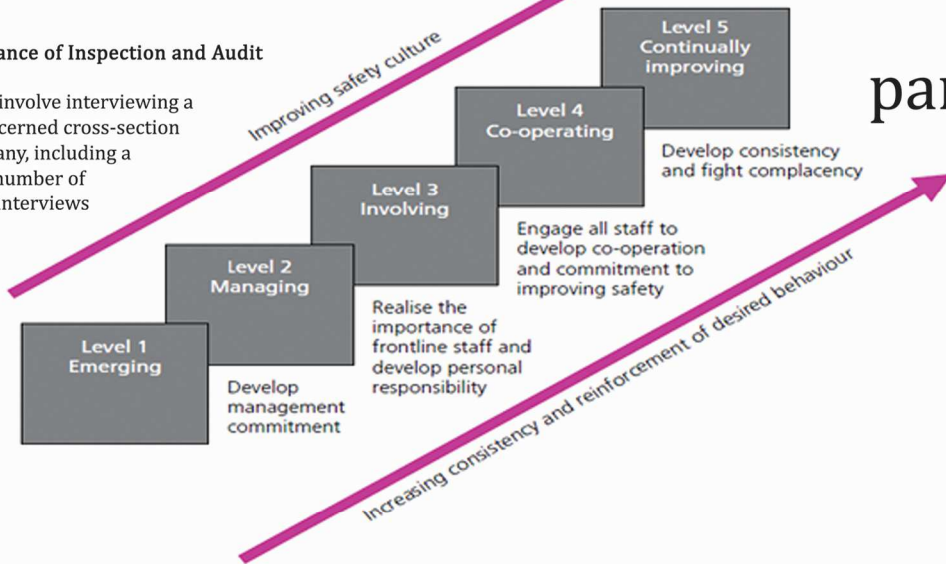
- Inspect all equipment in walkarounds with all crews concerned to ensure that they are in good working condition at all times.
- Supervisors and personnel to exercise Stop Work Authority (SWA) whenever necessary and required.

Let's remember that although we have a Key performance Indicator ("KPI") to keep LTA below industry standards (no more than 1 LTA per 1,000,000 man-hours worked), a KPI has to be honestly and transparently met. The fundamental objective is to get everyone home safely by building a safety culture around open, frank and efficient communication. I would like to encourage you all to stay aligned along the concept of operational discipline, and ensure that it is always maintained.

The active, open and full participation of every employee in safety is important to build ownership of safety at all levels and exploit the unique knowledge that employees have of their own work. This can include active involvement in LTA workshops of lessons learnt, hazards identification & risk assessments, effective pre-job safety meetings (TBT, JSA, JHA, and/or walk-arounds with approved checklists). In companies with a good culture, you will find that employees and management consistently view safety as a joint exercise.

**The Importance of Inspection and Audit**

Inspections involve interviewing a suitable cross-section of the company, including a reasonable number of employees; interviews



“ Safety culture is part and parcel of the overall company culture. ”

must be performed in a non-blaming environment. The range and scope needs to be appropriate to account for differing views, perspectives and experience. The interviewees should be given enough time to think of the questions and should also be given the opportunity to re-phrase and add questions if the questionnaire is felt to not comprehensively cover the item of concern. Such an open ground will provide a helpful picture of the overall safety culture of the company.

‘Safety culture’ is part and parcel of the overall company culture. The whole organisation’s culture has as big an influence on safety outcomes as the safety management system. The good communication of a safety culture around the safety management system can be compared to the mood of joyous people around a birthday cake. ■

**THINKING ALOUD with Daw Tin Nwe Wint Environmental Officer**

I'm an Environmental Officer and I started working at MPRL E&P on July 1<sup>st</sup>, 2015, in the HSE Department. Before joining MPRL E&P, I worked at a Food and Beverage Company as a Process Engineer, with a focus on the Wastewater Treatment Projects and Process. I received a Master of Chemical Engineering Degree from Yangon Technological University and now I am studying for my Master of Public Administration at CSIS.



In my initial first months at MPRL E&P, I faced a lot of difficulties and challenges. I studied Petrochemical Engineering at university and even though the basic principles of engineering are the same, everything was new for me at MPRL E&P. However, I always shared my knowledge about proper solid waste segregation, disposal systems and reducing plastic bags during our meetings with field staff, as well as during Technical meetings and Monthly Coordination meetings with MOGE, as this is something I am passionate about. So far, since we started, there is already a small group of employees complying with it. It's a good sign. If we do not initiate these practices, there will be problems for the environment and health of the communities and ourselves, as you will have rodents, rats and flies which bring sicknesses and even death, especially if you do not dispose of kitchen waste and plastic bags properly.

In our country, two kinds of plastic bags are currently in use. Low-density

polyethylene (LDPE) and polypropylene (PP), which will not be banned, and it takes about 100 years for these plastic bags to break down due to their density. It is a major cause of environmental pollution. Globally, many cities and countries have introduced regulations governing the use of plastic bags. In Yangon, in the downtown area, people often suffer from severe flooding during the rainy season because drains are blocked with discarded plastic bags and bottles.

From the consumer's point of view, plastic bags are handy for carrying things. From an environmental point of view, they cause environmental pollution and contribute to global warming. We need to take consumers into consideration but also the environment; we must replace plastic bags with another convenient form of packaging that can be used instead, such as cloth, string bags, or boxes and baskets woven with leaves.

My role as an Environmental Officer keeps people and the environment away from pollution. In my working environment, I will continue to train the community and our field team to promote environmental waste management as well as waste reduction, reusing and recycling to maintain a safe environment so I have planned five Environmental Awareness sessions for this fiscal year. ■

# MPRL E&P is Getting Behind the Education Sector of Myanmar

Ko Ko

MPRL E&P places great value in its manpower and that is its main asset for success. While until recently, education lost priority in Myanmar and since very early on, MPRL E&P has always placed a great emphasis on training by sending its brightest employees to earn graduate and post-graduate degrees in some of the best known academic institutions abroad such as the Colorado School of Mines in Denver, USA, Curtin University in Perth, Australia and Heriot Watt University in Edinburgh, Scotland, and since 2009, MPRL E&P's Management began engaging interns from MSc classes, initially in geoscience, and later in petroleum engineering. In 2009, MPRL E&P started its first geoscience internship program with four MSc students from Yangon University, and based on the success of its geoscience internship program, MPRL E&P expanded its efforts during the 2014-2015 fiscal year to include another internship program for twelve second year petroleum engineering students.

### Educational Support to YTU

In addition to the internship programs, MPRL E&P regularly supports some of the requirements as requested by Yangon Technological University, YTU and Yangon University, YU, to contribute to their educational development program.



Figure 1: Geoscience Interns Studying Outcrops in Minbu Area in 2009

Because of close collaboration with YTU, the Petroleum Engineering Department informed and discussed their requirements of the accreditation process with MPRL E&P. The accreditation criteria includes an acceptable ratio of teachers and students, teaching aids, standard laboratory equipment, a library system, class room facilities, industrial training/internship program, conducting projects, preparing research papers and so on.

To fulfill the requirements of teaching aids and lab equipment, MPRL E&P provided some of the production equipment relating to production operations such as zone isolation devices, different types of production packers, different types of sectioned downhole insert pumps, progressive cavity pumps, many connections of drill pipes, tubing, sucker rods and line pipes.



Figure 2 : Petroleum Engineering Students at MPRL E&P's Downhole Pump Maintenance Workshop in Mann Field in 2014



Figure 3: Students and MPRL E&P Senior & Line Management at the Internship Program Completion/ Certification Ceremony in 2014





Figure 5: MPRL E&P's CEO U Moe Myint Explaining Recent Developments in Myanmar's Petroleum Sector

In addition, to expand the industrial knowledge of the students, one of MPRL E&P's experienced engineers acted as an external examiner to evaluate the presentation skills and dissertations of the students.

MPRL E&P also donated cash as a silver sponsor to YTU Students' Union in July with the purpose of celebrating the third anniversary of the establishment of the Students' Union.



Figure 4: MOGE and MPRL E&P Donated Teaching Aids and Lab Equipment to the Petroleum Engineering Department of YTU

**Current Internship Activities**

Currently, twelve fifth year students are studying at the MPRL E&P Head Office on a weekly basis to prepare a petroleum engineering design project. The objective is to learn how to prepare an onshore deep well drilling operation starting from the geoscience study to the production stage. They are divided into three subgroups, each working on different sections such as Geoscience, Reservoir, Drilling and Production Engineering, while being taught by a multidisciplinary team from MPRL E&P. This internship, is one of the major subjects for the fifth-year class of petroleum engineering students.

As a small company compared to the scale of the industry, (on which nobody was betting in 1999 that it could operate an entire field with less than 2% of an expatriate workforce and expertise), MPRL E&P is proud to invest a large amount of time and money in comparison to other major independent companies in this industry, in developing future Myanmar generations to become proud owners of the knowledge and practice of the petroleum industry in this country.

The success of MPRL E&P's internship programs lies on and will continue to be largely dependent on further close cooperation with prestigious associations such as SPE (Society of Petroleum Engineers), MES (Myanmar Engineering Society), AAPG (American Association of Petroleum Geologists), MOGE (Myanmar Oil and Gas Enterprise), University of Yangon, Yangon Technological University, as well as other local universities preparing for petroleum industry degrees.

MPRL E&P firmly believes that by active cooperation and participation of such stakeholders, the value created for the educational development of future generations (particularly those who intend to enter the oil & gas industry of Myanmar) will be significant, long-lasting and material.

MPRL E&P remains committed to expand and improve its internship programs to ensure results in expanding the curricula of students as well as gearing up their career development aspirations.

MPRL E&P very much hopes that such effort by such a small company will encourage much better endowed partners of the Myanmar petroleum industry to follow suit and share their depth and width of knowledge with Myanmar's young generations for the long term benefit of the country. ■



Figure 6: MPRL E&P's Country Manager U Sithu Moe Myint Discussing Student's Petroleum Engineer Design Project



## HR Team

### The Role of Women in Myanmar

Myanmar is transforming gradually these days especially in the areas of Socio-Economic infrastructures and mostly in the education, behavior, attitude, fashion and living styles of the youth. The educational development and participation of young Myanmar women especially plays a critical role in the uplifting of Myanmar Socio-economic reforms.

In the past, many women in Myanmar quit their jobs after marriage and have been traditionally portrayed as housewives taking care of children and elderly people in the family, spending their lives doing daily household chores and leaving the husband in charge of earning income for the family. In general, most Myanmar women are admired for their good looks or beauty rather than for their educational or professional qualifications. As the global movement for gender equality gathers momentum, women worldwide have been able to play a wider range of roles and in several cases, even the leadership role. This serves as an inspiration to women in Myanmar to overcome the traditional male dominated cultural norms in which the 'man comes first' and an influencing factor in this change in Myanmar women's outlook is the increased contact with worldwide trends in dress-style, mindset, social behavior and attitude, which is especially noticeable among educated young women.

### Participation of Women in Leadership Roles

Over the next few years, retiring baby boomers (the earlier generation born between the years 1946-1964) will be departing soon, leaving a void and impacting future workforces around the world. It will leave gaps in leadership from the executive level down to the managerial base, creating more opportunities for women in the workplace.

As women are being pushed into the workforce in vast numbers, and just in time for the incoming gaps to be filled, it is important to note a recent workplace study which found that the most successful teams were the ones with more women in them and that when women made up more than 50 percent of a team, the team's collective intelligence rose above average. Gender diverse groups also provide varied points of view which make for better decision making and made smarter, more impactful teams. As the research shows, adding more women to teams increases intellect and the ability to collaborate and it also increases the chances for innovation, growing a company's profit and revenue.

### Women's Role in Mentoring, Leadership and the Talent Pipeline

Nowadays, many large multinational corporations including locally owned

groups of companies are prioritizing the recruitment, advancement and retention of women through forums dedicated to identifying top female talent, and robust development plans to integrate them into the leadership pipeline. By preparing women for management roles and career advancement, companies can bring diverse perspectives to the direction of an organization. This type of diversity fosters innovation and creativity through a greater variety of problem-solving approaches, perspectives, and ideas. In general, women possess personality traits such as wider social perceptiveness, higher empathy and the collaboration skills required to ease the tension of work disputes. These traits lead to higher collective intelligence and better communication skills within all team members.

Presently, most talented and well-qualified women are gradually taking mentorship and leadership roles in formerly male dominant areas in Myanmar, and this practice enables skill development and network building for other women. These types of relationships can help women progress through their mid-career challenges and potentially propel them into more leadership positions. The female workforce will also feel more connected, challenged and motivated at their place of employment and will then excel within their careers. Therefore, it is important for women to hone several key skills to overcome certain preconceptions and obstacles, and having a proper mentor relationship with women in leadership positions is critical for future success.

### Diversity of Workforce

Some leadership behaviors, observed more frequently among women than among men, have a positive impact on a company's organizational performance. Developing gender diversity is a key lever to achieve this since women adopt most of these behaviors more frequently than men. Women on boards bring different perspectives to the difficult issues facing today's corporations and diversity of thought results in better decision making. The participation of women on boards also better positions companies to thrive in today's global economy where the rapidly changing economic realities require nimble, strategic and well-informed directors. In this way, women complement and enhance the range of leadership behaviors that are critical to corporate performance.

Women use five leadership behaviors such as "People development", "Expectation and rewards", "Role Model", "Inspiration" and "Participative Decision Making", more frequently than men – particularly the first three and setting up women's networks within a company raises women's awareness of this fact. Moreover, it creates opportunities for broader professional exposure, while raising the profile of female leaders in the organization, which essential helps young women identify role models. By motivating women and facilitating their development, these initiatives are often remarkably successful in retaining and even expanding the female talent pool within companies.

### Uplifting the Role of Women Leaders in Myanmar

Organizations in Myanmar should support and encourage talented young women in their career ladders by providing opportunities for formal learning programs in technical and professional ways and welcoming more active participation by women in the community. Companies should also provide experience, knowledge, confidence and resources to help young aspiring female leaders in an effective way. To develop policies and programs that can effectively promote women's leadership and participation in decision making, the underlying social, cultural norms and persistent stereo-

types that portray women as inherent or "natural" followers need to be specifically challenged and addressed.

At all levels, from the community to the national, public education campaigns and vocational trainings are needed to achieve the shift required in thinking about what women can and should do and how they should act. Promoting and increasing the number of women will slowly, but surely, change stereotypes and support further change, especially since a key challenge to women taking on leadership roles is prevailing sense that gender equality is not seen as a critical factor for Myanmar to become a modern, developed and democratic nation. ■

From Page 9 ➤



**Daw Thandar Lin**  
Sr. Administration Officer  
Administration & Contracts Department

Education : B.A. (English) (University of Dagon, Yangon, Myanmar)

Diploma : Diploma in Management & Administration (Institute of Economics, Yangon, Myanmar)

I was recently transferred from Executive Management Office to Administration & Contracts Department as Sr. Administration Officer. In fact, the specific duties of an administrator very much depends on the policies, rules, regulations and guidelines as laid down by the company to which the administrator must strictly attend to. The main job responsibility of an administrator is to ensure the efficient and effective performance of all departments within an organization. They act as a connecting link between the Senior Management and the employees. They provide motivation to the workforce, assist and support them in realizing the goals of the organization.

Office administration is one of the key elements associated with high level of workplace productivity and efficiency. It is very difficult to run an organization without a good administrative body. It is the administrator, who makes certain that the rules & regulations are strictly adhered to in an organization.

Sometimes, it could be assumed that the role of an administrator is not very important in the company. But without the presence of an effective administrator, an organization can never operate in a sound and effective manner. All tasks & all departments are somehow linked or related to the Administrative Department.

To conclude my notes, I am trying to ensure that the organization operates with efficiency and effectiveness. This requires a set of skills where it is essential to handle many different types of people and situations within the organization. I am also trying to develop my specific skills needed to be an effective administrator which includes good communication skillset, and to be a highly organized person. ■



## Our Community : Pauk Kone Village

Zin Mar Myint

Nestled on the western bank of Irrawady River, Pauk Kone village has a population of 485 people and 119 households. The main livelihoods of the village are bucket weaving, bamboo mat weaving and bamboo fence weaving, occupied mostly by men and women and children who help them out during school holidays. The minority work in agriculture.

Pauk Kone village is one of fourteen villages close to Mann Field. As a result, it has benefitted from many CSR projects that MPRL E&P has implemented in Mann Field to address the effects of its operations on local communities. One of the CSR projects implemented was the construction of a concrete water storage facility and pipeline in April 2014, which cost MMK 1,700,000, while the contribution of the village was only MMK 32,420. As a result, the time spent to collect water for the local community was reduced, and they could allocate more time for other important activities. In addition, water is available 24/7, round the clock. In August 2017, a water filtration unit, costing MMK 2,666,720, was installed in the local school and the village contributed only around MMK 500,000. Thanks to the project, the difficulties the students faced in accessing clean drinking water have been solved – as previously they had to drink water from the river which when the water level was rising, was high in turbidity and unsafe, or at other times the water would simply not come. Now easy access to safe, clean water allows not only for better health, but also for more drinking water for the students.

The projects were the product of communication and coordination between MOGE, the village and MPRL E&P. The village was at the helm of the projects, through the formation of a working committee which oversaw the collection of funds, purchasing necessary materials, accounting, auditing, monitoring, and evaluating the sustainability of the projects.



**Ko Kyaw Kyaw Win**  
Community Volunteer  
Pauk Kone Village

Ko Kyaw Kyaw Win is a 32-year-old community volunteer from Pauk Kone village. He was inaugurated as a community volunteer in August 2016, and has been involved in the CSR initiatives in Mann Field since then. Ko Kyaw Kyaw Win has been especially involved with the Operational Grievance Mechanism Campaign which was launched in Mann Field in the 2016-2017 fiscal year to

increase the communities' awareness, and the application of a system to lodge their concerns and issues in a systematic way. Ko Kyaw Kyaw Win also actively participated in disseminating information sessions for groups of women and men and also contributed to group discussions among the community volunteers to figure out ways to improve messaging across different target groups.

Regarding the role he is playing as a community volunteer, he said, "I am elated that I am part of the local development that we are witnessing now with which the local community is very satisfied. Implementing local development work in Mann Field is indispensable as it helps the business operations be sustainable. It's a win-win situation." ■





If you choose the right place to travel to, with the right people, at the right time, I am sure that you will have unforgettable memories.

# Putao

## Will Always Be In My Memories

The Su Mon

My friends and I were dreaming about going to Putao since last year, but we didn't get a chance due to many reasons. Luckily, one of my friends who had previously lived in Putao about 5 years ago was planning to return there for business. Once we heard this news, we immediately started packing to go with him. We definitely could not miss this chance as he knew the area well, since he was a French and English-speaking tour guide. He planned the trip very precisely and carefully and we could not thank him enough, as without him, we wouldn't have had a chance to explore Putao much within such a short period of time.

We went there on May 2017 and stayed 4 days/3 nights at Putao Trekking House which was located in the downtown area, just a few minutes' walk to restaurants and the market. The first thing I noticed about Putao was the view from our flight. As our flight was touching down at Putao Airport, I felt like I was landing into a forest as Putao is surrounded by beautiful trees and mountains.

### Day 1

After checking in, we headed to a restaurant for lunch as we were all super hungry. We had Rawang traditional food at Taung Paw Thu restaurant, and all we could say about it was "delicious!" The soup was delightful, the salad was tasty and the fried baby potatoes were superb. During lunch, we met with our rafting guide Ko Aung Ram, a very nice and gentle Rawang guy and we discussed our rafting trip for the next day.

In the afternoon, we walked through the town and visited Kha Kar Bo Razi WCS Wildlife Conservation Society Education Center where you can see stuffed animals, butterflies and rare species. We then went on to tour the Shan villages and returned back to our hotel by car. One thing that I noticed was that none of the people in the Shan villages wore traditional dress anymore in their day to day lives.

Later, we had dinner at Hta Wan Ya Zai Restaurant in downtown and ordered a mixture of Shan and Chinese food and we found that the vegetables were very fresh.

### Day 2

This morning, we drove to Machanbaw through the newly built suspension bridge over Malikha River. The view from the bridge was very nice and we stopped and took many great photos. On the way, we stopped at Guba Guest House which was built by the British colonials. The guest house is now owned by the government, and is still in good shape and has a very nice view overlooking the river. This was the first real taste of what we were looking for, as it was a true escape from crowded city life and a stressful environment. We then continued our visit to Rock Dragon which has historically been worshipped by local ethnic people to produce more rice during harvesting time. I noticed that there was a small pagoda near the head of the Dragon which was painted recently in a gold color.

After a few minutes' drive, we stopped at the river bank where our rafting guide and team were waiting for us. We wore life jackets, helmets and placed all our things in a water proof sack. Right after the safety briefing, we received a quick training to get familiar with the instructions, including when to row and when to stop. We were all a bit nervous for rafting as it was the first time for all of us and some of us did not know how to swim.

We started rowing with the raft on the Malikh River slowly until we met the first rapids. All were stunned when the first rapids touched the raft as the rafts jumped up a bit and we felt like we were no longer on the water. Although our guide said keep rowing, we just stared, put the oars on our lap, which was the stop position, and held on instead to the safety rod. Eventually, we got used to it and could finally enjoy the view and relax. The rafting we did was level 2 only, so it was very safe for beginners.

We headed down to Fairy Island and stopped there to enjoy our packed lunch. It was also here that our rafting ended. We did a total of 1 hour and 15 minutes rafting on the Malikha River and the scenery from the island was amazing. I could just sit there the whole day and listen to the sound of the river.



We left the island by speed boat and stopped at Mochin village which has only 20 different households. It is a very quiet and nice village surrounded by forests and there were also many pebbles on the bank of the river near the village. We then took a boat to Naung Kiang village and from there we drove back to the hotel and had dinner at Kham Su Mo, Khanti Shan restaurant.

**Day 3**

Today we only did a half day tour in the morning to Kaung Mu Lone village and visited the Kaung Mu Lone pagoda which was built by King Arthawka. We walked through the village and visited a monastery which is over 100 years old. We then had a light lunch at a local restaurant near a bridge.

After lunch, we headed back to Putao passing through the Rawang and Kachin villages, then we had dinner at Kham Su Mo, Khanti Shan restaurant and had very fresh meat, including chamois, wild boar and more.

**Day 4**

Since we all enjoyed our rafting experience so much, we decided to do it again and our guide suggested that we should try rafting on Nam Lang creek next, which flows into the Malikha River.

We drove to the Mulashidi village and got onto a four-wheel drive car to go up the hill until we could no longer continue by car. From there, we started walking through the forest for about 30 minutes to reach the starting place for rafting where our guide and his team were waiting for us. Along the way, we encountered clumps of bushes, a slippery path, and were also scared as there were slugs and leeches that we had to avoid. We felt a little dismayed because of the large expanse of wilderness we had to pass through, but finally, we reached our starting place and could begin rafting down the 6 km of icy Nam Long creek, where there were amazing views, and cool crystal-clear water. When our raft was closer to Malikha Lodge, some of my friends jumped into the river mainly relying on their life jackets and floated along the river.



At first, I was reluctant to go into the water but they all seemed quite happy and I was sure it would be a very good experience to swim in the Malikha River. I really didn't want to regret that I did not experience the feeling of cool water flowing down from the snowy mountain when I had the chance, so I finally decided to go into the water. The view, the river, and the experience which was all given to us by nature and the world, is a moment that will be always in my memory.

We reached Malikha Lodge and changed our clothes and enjoyed the amazing view with coffee. Luckily, the view from the lodge allowed us to closely observe some rare animals nearby. Most of the time, we are too busy to enjoy the beauty of nature but the Putao trip made us

want to travel more to other parts of Myanmar where many untouched beauties lie.

At night, our friend arranged a farewell dinner at Kachin house which was located across from our hotel. A table, which accommodated 7 people, was filled with different dishes and everyone was amazed to see so many dishes prepared just for us. A big "wow" came out of us automatically. The house owner was a good cook and she had prepared all the dishes with her daughter. Having the traditional food and drink in the traditional Kachin house made us feel very special.

**Day 5**

No one wanted to go back to Yangon. Some even prayed that the flight would be cancelled so they could have a good excuse to take leave from work. No wishes were granted though.

Early in the morning, we visited a market and bought baby potatoes and traditional longyi to give as presents for friends and family. Until we reached the airport, we did last minute shopping near the airport called Aungy Hla's shop. The flight arrived on time and we said goodbye to our dear friend who would finally have the chance to work after we left.

Putao will always be in our memories. The food is fresh and delicious and the air is very clean. You will only see a few vehicles in the town, and there is also no noise. As it is far away from city activities, you can

easily enjoy the simple life. Everywhere you look, it is green with snowcapped mountains all around you. Electricity will be out after 21:00 hours and you must go to bed, but you are also up early. There isn't much of a choice but what a peaceful and healthy way of life it is! The local people are also very friendly and helpful.

I have travelled a lot for leisure trips before in the country and abroad. However, among the many trips I have taken, Putao is the most remarkable and unforgettable one. If you ask me whether I would like to go there again, I would answer that I would want to stay in Putao forever. ■



## 15 Years Service Award Ceremony



## Press Conference on Gas Discovery at Well Pyi Thit-1 Offshore Block A-6

