

Persevering Despite Oil Price Uncertainties



Ir. Razak Yakob

Ir. Razak Yakob Razak has been in the O&G industry for over 20 years and is currently an Independent Drilling Consultant and a part-time lecturer. He was a PRODIGY Technical Review Committee Member when he was with one of the Petroleum Arrangement contractors. He was also an assessor for the PRODIGY's Drilling Engineering programme.

Not many people are aware of the existence of PRODIGY (Program for the Development of Ingenious Young Talents) in Malaysia. It was created to address the serious issue of a shortage of competent resources in the upstream oil & gas (O&G) sector.

As mentioned in Oil & Gas Talent Outlook 2016 by Mercer, "Despite forecasted gains in nuclear, hydro, biomass, and solar energy production, the predicted growth rate in global energy demand will outstrip the growth of all these alternative fuels".

Hydrocarbons will still need to make up for the difference, so the O&G industry shall still thrive for a very long time despite comments that the industry is heading for a sunset.

A survey conducted by Mercer Energy Vertical, Asia Region, indicated that we would be facing manpower shortage in the Oil & Gas Sector by 2017 (Figure 1). This survey was conducted in 2013 before the oil price slump. Demand for resources has eased since then.

In the beginning of Q3 2014, the price of oil started to slide. A 10-year chart from Macrotrends shows this trend (Figure 2).

O&G companies around the world started to be cautious in the launching of new projects. Marginal projects were the first to be shelved and kept for future consideration when the demand and price of oil increased. When new projects were shelved, the demand for manpower reduced. Companies such as TH Engineering, Schlumberger, and

Shell were among the first to launch their "right sizing" initiatives.

At the time of writing (June 2016), the demand for manpower in the upstream O&G sector had eased quite significantly. Even though the price of oil went back to US\$50 per barrel, the market would still need to stabilise and find a new economic level before new projects could be launched. However, many world experts are positive that oil price will bounce back to a level where projects can, economically, be approved at the FIR (Final Investment Review) stage. When that happen, there will be a high demand for resources again though exactly when this will happen, is raising many views and opinions. Many believe that,

based on historical trending, the price goes in a cycle.

The O&G industry is usually divided into three major sectors: Upstream, Midstream and Downstream. The upstream sector includes the search for potential underground or underwater crude oil and natural gas fields, drilling of exploratory wells and subsequently, drilling and operating the wells that recover and bring the crude oil and/or raw natural gas to the surface. The downstream sector commonly refers to the refining of petroleum crude oil and the processing and purifying of raw natural gas as well as the marketing and distribution of products derived from crude oil and natural gas. Midstream operations are often included in the downstream category and considered to be a part of the downstream sector (Wikipedia).

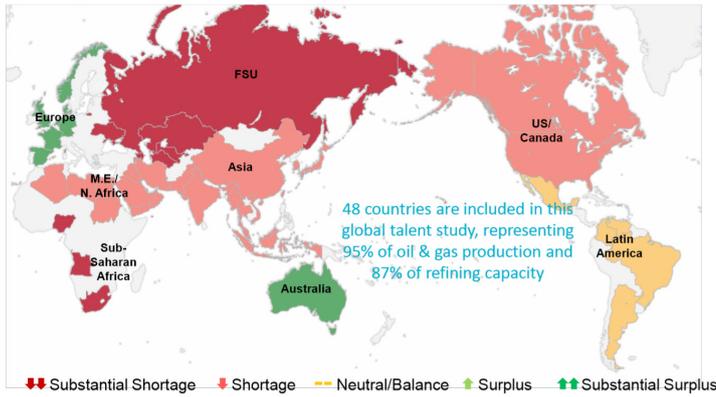
O&G requires highly skilled professionals to design and manage the projects for successful execution. The execution has to be safely completed with time and cost effectiveness. Therefore, it is pertinent to have initiatives such as PRODIGY, to address the issues of competent resources shortage in the Upstream O&G sector and to provide a long-term strategy for growing the capability of our people, not only for Malaysia but also the international market.

PRODIGY was created with the strategic collaboration between Petronas and Petroleum Arrangement Contractors (PAC) to address the issue of manpower. It was launched on 27 February, 2015, in conjunction with the initiative for Upstream Long Term Integrated Manpower Assurance (ULTIMA). The first intake was successfully accomplished on 20 July, 2014, focusing on Petroleum Engineering and Process & Operations. The second intake was on 26 April, 2015, with the addition of Drilling Engineering into the programme.

PRODIGY was formed with the aim to focus on young talents, fresh graduates or cross-disciplines training or redeployment of resources

Future state of O&G workforce

Overall, across the key O&G talent families, FSU and Sub-Saharan Africa are projected to have the greatest 2017 talent deficits



From Mercer's External Labour Market Analysis of Oil and Gas Industry, 2013 analysis of future labour supply and demand.

Figure 1: From Mercer Energy Vertical Survey, 2013



Figure 2: 10-Year Oil Price (WTI) from Macrotrends

from other disciplines. Apart from creating the platform for a sustainable supply of local graduates for the industry, it also aims to:

- Provide additional options for the fresh graduate.
- Increase employability of Malaysian graduates.
- Enhance the capability, competency and marketability of graduates.
- Develop, attract and retain talents via collaboration with operators and service contractors to ensure the sector has sufficient work-ready talents.

PRODIGY was also created to increase awareness among graduates to consider O&G as a career, to attract the best talents to join the industry and to address the issue of unemployed local graduates and develop them to be industry ready.

The programme is led by Petronas via its strong arm, Malaysian Petroleum Management (MPM). The members comprise all Petroleum Arrangement Contractors (PAC), which includes PSC – Petronas Sharing Contracts and Risk Service Contracts. O&G Service Contractors such as Schlumberger, Halliburton and others, are also closely involved in the programme since they provide facilities for some programme segments as part of On-The-Job exposures.

Practically every party involved with the O&G industry in Malaysia is working together hand-in-hand to ensure the success of this initiative. The programme is managed by INSTEP (Institut Teknologi Petroleum Petronas), which handles all training programmes by Petronas.

• PRODIGY Framework •

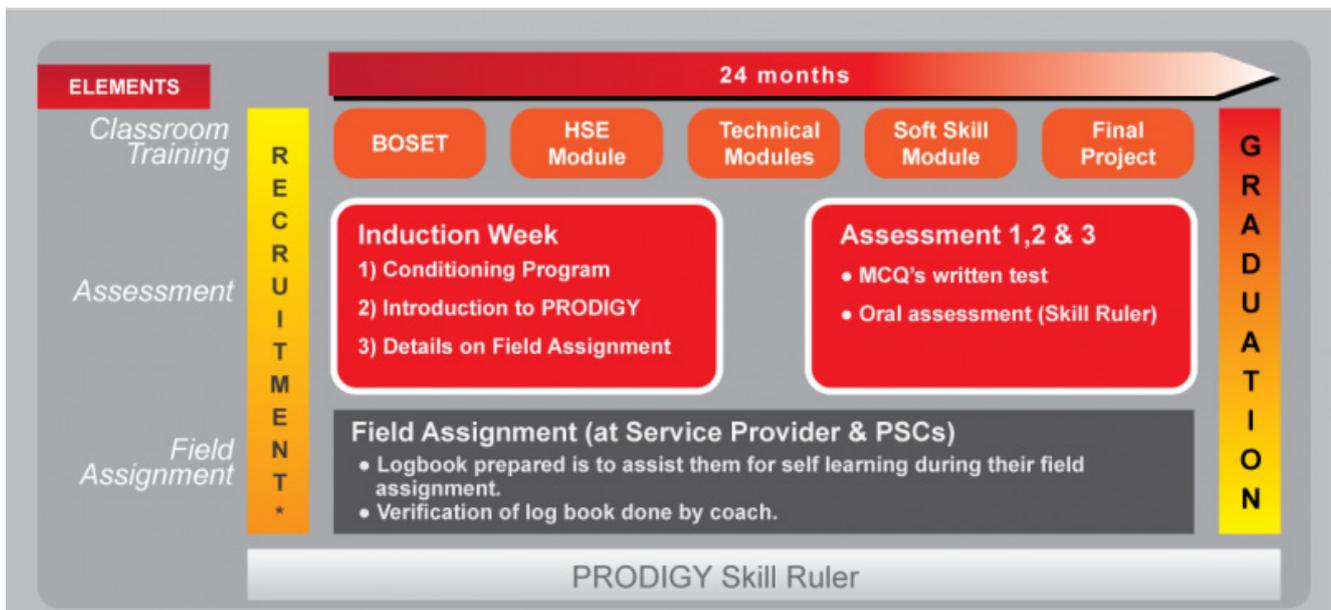


Figure 3: Prodigy Framework, taken from the PRODIGY website



Figure 4: Offshore operations such as this requires skills offered by PRODIGY participants

It is designed as a 2-year programme for fresh graduates or re-skilling of resources from other industries. It comprises approximately 10-20% classroom work (technical modules, HSE modules, soft skills modules) and 80-90% On-The-Job training. This is what sets it apart from other programmes offered by other institutions of higher learning. Because of the collaboration between the PACs and Service Contractors, this will seem like the candidates start work in an organisation right after graduation.

What is different is that the programme is intensive, very structured and is a complete module to ensure that the graduates are ready to accept actual workload from the organisation as soon as they start.

The programme focuses on 4 disciplines: Petroleum Engineering, Project Management, Drilling and Process & Operations.

The candidate who applies for this programme, goes through a rigorous evaluation and interview process, where eventually, less than 20% of applicants are placed. The successful ones will be sponsored by PAC or Service Contractors, so upon completion of the programme, the candidates will serve in the sponsor organisation or some other arrangement, as according to the contract requirements.

With the drop in oil price, the programme faces the challenge of staying relevant to thrive in a period when every ringgit spent must add up to positive economic margin for an organisation, if it is to be approved for execution. Training programmes for operators are non-profit generating expenses, so they are at the bottom of spending lists.

In an effort to stay relevant today, the programme was re-reviewed rigorously for every single line item. The result was a reduced programme period, from 24 months to about 18 months, depending on the disciplines. The challenge is to accomplish the same objectives without reducing the quality of programme. With the focus on increasing the efficiency of the programme, the mission is to ensure candidates can "run" the moment they land in the job, with specific skills that they have been assessed at various levels of the programme.

Despite the current oil price uncertainty, the competency development of candidates currently in the programme, and

new intakes in future, must continue to proceed because they will be the ones to fill in the gaps in the industry. The market condition will either get back to what it used to be or will find an equilibrium point where the work must go on and the supply of hydrocarbon will continue to be in demand as an energy source. Fossil energy will continue to be a relevant source for years to come.

The need for highly skilled professionals in the upstream O&G sector will be an issue again once the demand for fossil fuel is back. Do we wait for the price of oil to go up to start training again or do we soldier on and prepare our resources for future needs? Do we choose to be proactive or whinge about the lack of resources like we did in the past? ■

REFERENCES

- PRODIGY website for pictures and information: <http://www.prodigymalaysia.com>
- Presentation Package by Mercer's Energy Vertical, "Workforce Planning in Oil & Gas", 29 October 2013, Kuala Lumpur Convention Center
- Crude Oil Chart website: <http://www.macrotrends.net/1335/dollar-gold-and-oil-chart-last-ten-years>
- Bangkok Post, 15 March 2013, "Malaysia faces oil & gas brain drain"
- The Star, 8 August 2013, "Chua: Many Factors Behind Brain Drain"
- Wikipedia