Petrofacts

June 2014

Petrofac

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PHOTOGRAPH BY JERRY BALLOCH

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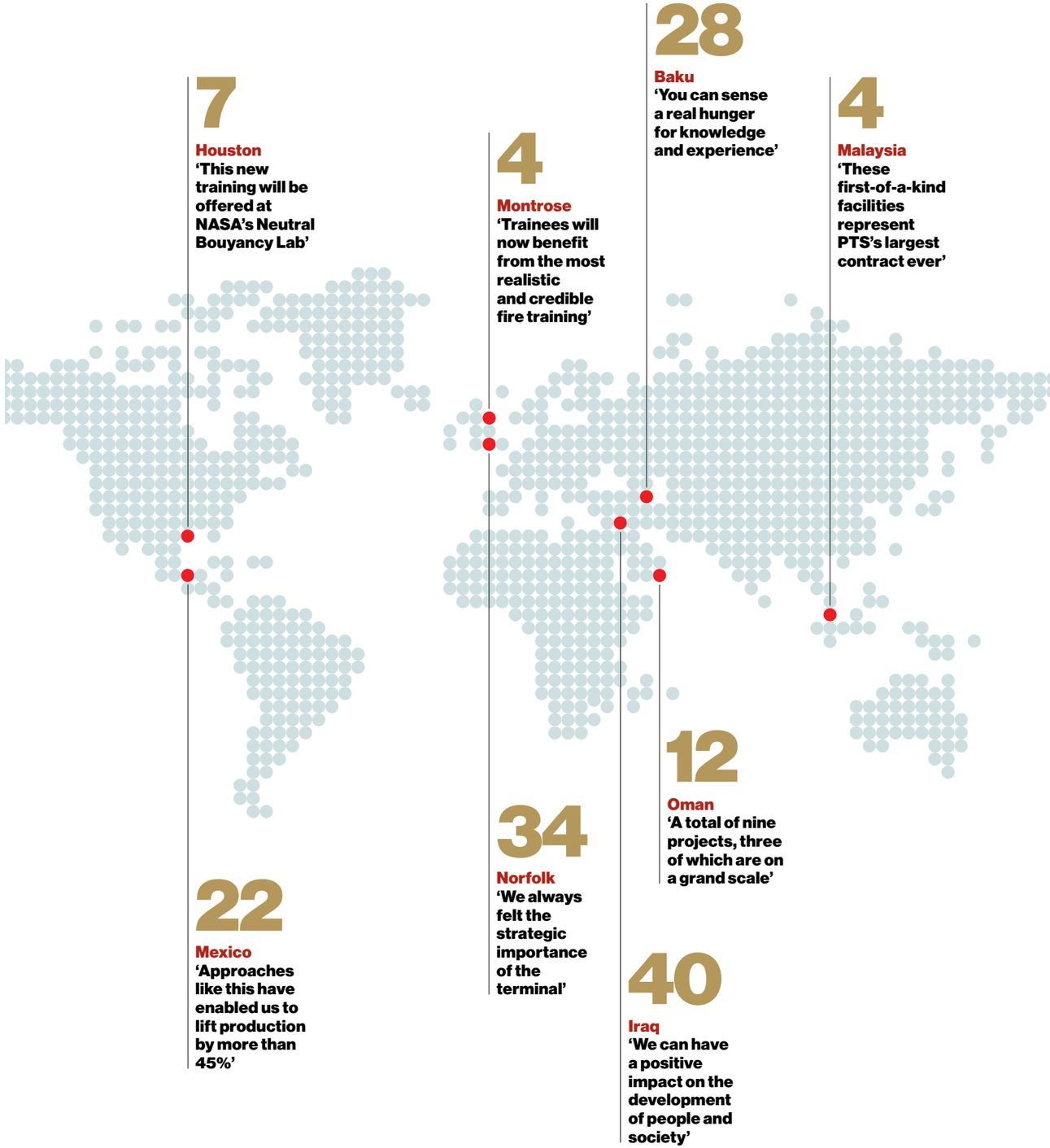

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Petrofacts

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EMERGENCY TRAINING BLAZES AHEAD

The upgraded Montrose fire and emergency training centre now offers better, bigger and greener facilities

For more than 35 years, the Montrose fire and emergency response training centre in Scotland has played a central role in setting safety standards in the oil and gas industry. In April, the facility opened its doors again after completing a £1.5 million upgrade.

Fire and well services manager from Petrofac Training Services, Pete Dennett, says the investment ensures that the Montrose facility will continue to promote offshore and onshore safety for years to come.

"Since it first opened its doors in 1978, Montrose has delivered world-class training to more than 350,000 people from around the world," he adds.

Following the upgrade, trainees will now benefit from the most realistic and credible fire training at one of the world's most advanced centres. The 16-acre site includes nine state-of-the-art training modules, three heli-decks and vast practical fire grounds to ensure trainees are prepared for a wide range of emergency response scenarios.

Improvements to fire training facilities have also made the centre greener, with natural gas now in use on the fire ground, new fire pumps and a new electric fire-ground support vehicle to replace its diesel predecessor. These changes have cut greenhouse gas emissions, shrinking the centre's carbon footprint by half.

The centre has also been a part of the development of emergency response equipment acting as an industry testing ground for new technology including new firefighting foam and deluge systems.

Malcolm Webb, chief executive of Oil and Gas UK, adds: "I applaud this far-sighted investment by Petrofac in both the future of the UK offshore oil and gas industry, and in the safety of the people who work in it."

World-class training: Fire and well services manager Pete Dennett

'Trainees will now benefit from the most realistic and credible fire training'

PETRONAS TRAINING FACILITIES ARE ALL SYSTEMS GO

The PETRONAS training centre known as INSTEP, on the east coast of Malaysia, has opened new facilities complete with replicas of upstream and downstream facilities, including a drilling rig, a drilling simulator and an engineering workshop. These first-of-a-kind facilities, built and managed by Petrofac on behalf of PETRONAS, represent PTS's largest contract ever, awarded in September 2013.

INSTEP (or Institut Teknologi Petroleum PETRONAS in full) started out in 1981 as a technical training school to train young Malaysians as oil and gas technicians in a realistic and safe plant environment. It has evolved to become an integrated oil and gas training centre, offering development programmes to technicians and engineers.

Inside the facility in Batu Rakit

Located on a 200-acre plot in Batu Rakit, Terengganu, it will host INSTEP trainees who undergo on-the-job training, and offer real processes and operations as if working on live plant. The facility will increase INSTEP's training capacity by twofold, to around 1,700 trainees a year, and is open to other industry players, both local and international.

Under the agreement, Petrofac will undertake the management and operation of the two upstream facilities, for the next five years with an option to extend for two years. It follows an earlier agreement between Petrofac and PETRONAS, aimed at exploring how the two companies could collaborate in competency development and capability building.

COLLECTING OUR ENVIRONMENTAL DATA

Petrofac has always been aware of the environmental implications of its business, and in this year's annual report focused on measures being taken to improve reporting on environmental protection.

Last year, Petrofac commissioned Ricardo-AEA, a qualified independent party, to assure and validate our greenhouse gas emissions data collection processes. Their review concluded that Petrofac has made good progress in calculating its carbon footprint, and has set up credible processes for collating data and calculating emissions. There was an increase in the company's carbon footprint, a significant proportion of which was due to the addition of the Berantai and West Desaru FPSOs. Petrofac's operations, including its share of joint ventures but excluding customer-owned facilities, emitted 284,636 tonnes of CO_2 in 2013.

To raise awareness among employees, Petrofac holds an annual environmental month. Focused on energy efficiency, this has led directly to energy gains in Romania and Mexico. And waste management initiatives, run for the past seven years, have resulted in significant recycling of waste paper and plastic.

ILLUSTRATION BY LUCY WIGRASS

PLASTIC

Since 2006, waste management initiatives have led to six tonnes of plastic being recycled

ELECTRICITY

Environmental Month led to a 10% decrease in electricity consumption in Romanian operations

DIESEL FUEL

Petrofac reduced its diesel fuel consumption in Mexico by 12%

PAPER

Some 358 tonnes of waste paper have been recycled since 2006

ENQUEST CONTRACT SECURED IN NORTH SEA

Petrofac is set to continue to support EnQuest's North Sea assets, after securing an operations and maintenance contract for up to ten years.

The contract, worth an estimated $630 million, supersedes an initial five-year contract awarded in 2013. It supports 300 offshore and onshore jobs, and will see Petrofac continue to provide operations and maintenance services to EnQuest on the Thistle, Heather and Northern Producer assets, plus the floating production, storage and offloading vessel the EnQuest Producer, currently undergoing final finishing and commissioning work ahead of its deployment.

Bill Dunnett, managing director, Petrofac Offshore Projects and Operations says: "This is testament to the continued strength of our relationship with EnQuest and to our understanding of these assets. We have succeeded in delivering safe production, asset integrity and performance improvements for almost a decade now which has added long-term value to the operation and longevity of the assets. We've done this by being responsive, flexible and relentlessly focused on safety. We're now looking forward to continuing to work closely with EnQuest to help develop and implement long-term plans and, to maximise returns for the next decade and beyond."

SAFETY TALK TAKES OFF

Experiences in the air provided inspirational examples in retired astronaut Mike Mullane's talk on safety

Retired astronaut (and fighter pilot) Mike Mullane knows more than most about safety – lessons learned the hard way.

At Petrofac's 10th annual safety conference, held in Dubai in April, Mike explained to the audience of around 150 of Petrofac's senior leaders how events in the air had shaped his approach to safety leadership.

During his talk, he focused on three themes: how to avoid the 'normalisation of deviance'; the importance of not becoming a 'passenger' in your attitude to safety; and how to push yourself and develop your own personal leadership skills.

In making his first point, he talked the audience through a space shuttle launch, pointing out elements that make for a successful mission. His main focus however was on the story behind the *Challenger* space shuttle disaster, where all seven crew members were killed when it broke apart in 1986. He explained how the accident was in fact a 'predictable surprise', the result of a series of decisions that led to shortcuts being taken and then becoming the norm. While the specific cause of the accident – the failure of a booster rocket O-ring seal – had been identified as an issue six months before, the fact that flights continued safely in the meantime meant that the team's launch decision-making became infected with this logic. Mullane calls this the 'normalisation of deviance', and explains how to defeat this phenomenon by recognising it, and ensuring that the corporate 'safety memory' never fades.

Heads up: Mike Mullane

His second point was about the importance of 'speaking up' about safety, whatever the circumstances, and whatever your position. He explained how, serving as a fighter pilot, he was co-piloting for a very experienced captain. His pilot had 1,500 flying hours, whereas he had just 30 minutes in that particular plane. They were on a test flight when Mike noticed that the fuel gauge had reached the point where you no longer have enough fuel to get home. He made the mistake of assuming that his more experienced colleague had made a calculated risk, when in fact he hadn't noticed the problem – and so he said nothing. In his own words: "Rather being a member of a two-man team, at that point, I became merely a passenger." The plane nosedived.

NASA learned safety lessons from its shuttle programme

Both pilots hit their ejector seats and, luckily, survived. From that point onwards, Mike understood the importance of always speaking up and never again becoming a 'passenger'.

For Petrofac's Group head of safety, Chris Allen, who also spoke at the conference, these messages support the company's drive to improve its safety performance. "Safety is our first and foremost value, and if we are going to get better at it, we need strong leadership and personal involvement. We need to set clear expectations – and to ensure that our people can manage risks well, have the right experience and can speak up."

OFFSHORE WIND CONTRACT IN NORTH SEA

Petrofac and Siemens have been awarded a major contract from TenneT, the German-Dutch transmission grid operator, for the BorWin3 offshore wind farm grid connection in the North Sea.

Petrofac will be responsible for the construction and offshore installation of the BorWin3 platform, which will house a Siemens high voltage direct current (HVDC) station, that converts the current produced by the wind turbines from AC to DC before transmitting it onshore to the German national grid. The HVDC station will be one of the biggest of its kind with a transmission capacity of 900 megawatts (MW). Borwin3 is scheduled to commence commercial operation in 2019.

Marwan Chedid, chief executive of Petrofac's Engineering, Construction, Operations and Maintenance (ECOM) business, says: "Petrofac is involved in a number of projects with TenneT in the German North Sea, and we are delighted to be partnering with Siemens on this significant contract, which deepens a relationship with an important customer."

Since 2009 Petrofac has also been providing people, maintenance and support services to the adjacent Borwin alpha platform, which is also operated by TenneT and houses a 400MW HVDC platform. In 2010 Petrofac began supplying engineering, design, construction and project management services to the DolWin1 HVDC platform and in 2012 established Petrofac Deutschland GmbH, based in Hamburg.

NEWS ROUND UP

Reggane project awarded in Algeria

May: Petrofac was awarded a 36-month-contract worth more than $970 million for the gas gathering, treatment and export facilities package of the Reggane North Development Project in Algeria's Sahara Desert.

Awarded by Groupement Reggane, a partnership comprising Algerian state-owned company Sonatrach (40%), Spain's Repsol (29.25%), Germany's RWE Dea AG (19.5%) and Edison of Italy (11.25%), Petrofac will be undertaking the engineering, procurement, construction, commissioning and start-up of the gas treatment plant, gathering system and export pipeline.

The Reggane project, which is 1,500 km south-west of Algiers, will bring on stream 26 wells from four fields in the Reggane basin (Reggane, Kahlouche, Kahlouche South and Azrafil South East), all part of permissions granted for blocks 351c and 352c.

Subramanian Sarma, managing director of Petrofac's Onshore Engineering and Construction business, says: "This award represents another imortant building block in our long association with Algeria, where we have been operating successfully for more than 15 years."

Oilennium gears up to meet demand for eLearning

May: Oilennium is expanding its UK and USA offices in response to an increase in demand for its online training systems which has tripled since 2012.

The Petrofac Training Services (PTS) company provides eLearning training services to the oil and gas industry. Its total number of employees in the UK and USA has grown by 30% to 44, over the last five months. To accommodate its growing numbers, Oilennium also doubled the size of its global headquarters in Norfolk, England, and its US office has recently moved with PTS into new, larger premises in Houston.

New helicopter escape training launched at OTC

May: Petrofac Training Services and Raytheon have launched a first-of-its-kind offering under their jointly owned Hi-Con Training programme. The new Tropical Helicopter Underwater Escape Training (THUET) course was unveiled at the Offshore Technology Conference (OTC) in Houston.

Approved by OPITO, an accreditation body for the oil and gas industry, this new training for high-consequence oil and gas exploration scenarios will be offered at NASA's Neutral Buoyancy Lab, and has been accepted by Shell and other Gulf of Mexico operators to satisfy their warm-water HUET requirement. The course teaches delegates how to escape a helicopter following an unexpected water landing.

Harweel EP contract in Oman

March: Petrofac has been awarded an Engineering and Procurement (EP) contract by Petroleum Development Oman (PDO) to provide services for its Rabab Harweel Integrated Project (RHIP) located in the Harweel Cluster of fields in the south of the Sultanate of Oman.

The contract also includes construction and commissioning management support services with Petrofac providing full support to PDO during the construction and start-up phases of the integrated oil and sour gas facility.

The total contract value is expected to be more than $1 billion with around one quarter of the revenues relating to professional services (engineering, construction and commissioning management).

Tropical helicopter escape training launched in May

Oman sets up centre of excellence

March: Takatuf Oman, the human capital solution provider for Oman Oil Company (OOC), has signed an agreement with Petrofac to establish an industry-leading 'Centre of Excellence' in Oman.

Slated to become the largest technical training centre in the country, and starting its operations in 2016, the new facility will combine theory with practical application across a number of disciplines, with an aim to train Oman's energy and energy-related workforce to international standards.

Ayman Asfari, Petrofac Group chief executive says: "We are delighted to be supporting the development of the Oman national oil and gas workforce at a time of significant activity in the sector."

FEED contract awarded on Abu Dhabi's Bab field

February: Petrofac has been awarded a $21 million front end engineering design (FEED) contract by Abu Dhabi Company for Onshore Oil Operations (ADCO). This project, in the Thamama production zone, forms part of ADCO's Bab Integrated Facilities Project, 150 km south-west of Abu Dhabi city.

Prior to award of the FEED, through its specialist Engineering & Consulting Services (ECS) business, Petrofac also successfully completed conceptual studies for the same development.

Due to complete in early 2014, both ADCO and Petrofac personnel are working together in an integrated taskforce team from ECS' UK operating centre in Woking .

Khazzan CPF project won in Oman

February: Petrofac won the BP contract, worth $1.2 billion, for the central processing facility (CPF) for the Khazzan gas project in Oman. The scope of work will include engineering, procurement and construction of the central processing facility at the Khazzan field.

The project is expected to be completed in 2017.

Refinery project contract secured in Kuwait

February: In a joint venture with Samsung and CB&I, Petrofac has received an award notification for Kuwait National Petroleum Company's (KNPC) Clean Fuels Project, Mina Abdulla refinery in Kuwait. The lump sum engineering, procurement and construction scope of work contract is worth $3.7 billion, of which Petrofac's share is $1.7 billion.

‘YOU HAVE TO BE PATIENT, YOU HAVE TO ACCUMULATE EXPERIENCE’

Marwan Chedid was one of the first employees to be approached by the fledgling Petrofac – and his talents have been crucial to both its growth, and its ongoing success. Interview by Rupert Wright. Photographs by Jerry Balloch

Marwan Chedid is not given to dwelling on the past, nor speculating on the future. In fact, he doesn’t seem overly keen on being interviewed, as it might keep him from an all-important task. In his office on the 16th floor of Al Khan Tower One in Sharjah, the decoration is sparse, not overly personalised – or maybe he simply does not consider interior design to be very important.

Now chief executive of Engineering, Construction, Operations and Maintenance (ECOM) at Petrofac, with around 16,000 people in his group, he’s come a long way since graduating from the American University of Beirut with a degree in mechanical engineering in 1982. But both he and his office remain refreshingly free of clutter or affectation.

As a young man he had not even planned for a career in oil and gas, a tribute perhaps to his philosophy of not trying to anticipate the future. Indeed his first job was in water treatment, and it was really engineering that was his passion. Two years after graduation, the civil war had already started in Lebanon, and he found an opportunity with CCC (Consolidated Contractors Company) in Oman.

“When you grow up in this region, you eventually realise the opportunities are in oil and gas,” he says.

He spent much of the next six years living in the desert of Oman. “It was tough but you get used to it,” he says. “You develop certain habits to cope; you read a lot, and work a lot. We used to work six and a half days a week. You also forge very strong relationships with the people you work with. We’ve all gone our different ways, but we can still meet up after a gap of 10 or 15 years and we’re firm friends again.”

In 1991, by now a project manager aged 29, and newly married, he received a phone call from Maroun Semaan. “Maroun told me about the new business he was setting up at Petrofac with Ayman,” says Marwan. “I also knew Ayman from working in Oman. It was an intriguing offer. There were a number of things that attracted me immediately. First, it was a chance to move up the supply chain to do engineering, procurement and construction work. Second, it was an opportunity to be part of a start-up rather than a huge company.”

He spent six months deciding whether to stay with his job or take the risk of joining the start-up. By now Petrofac had 10 other employees, so he became employee number 11. At the time, the company had one project in Syria and was on the verge of winning another project in Oman.

Marwan was sent to Syria, shown around by Ayman for a couple of days, and then left on his own. Was it daunting?

“No,” he says. “Ayman gave me lots of support, but I had been hired to do the job and I had to get on with it. There are always challenges in life; you have to keep focused as you go along. We continued having lots of jobs in Syria, in fact our last project ended just before the war started.”

It was in Syria that he began to develop his leadership skills. “I try to help people resolve issues, I get immersed in people’s problems and work with them rather than leading from the back.”

He thinks leadership is inherently something you have to develop yourself and gather from experiences, not simply learning from books. “There was a short period when everybody was reading Jim Collins’ *Good to Great*,” he says. “And I enjoyed it, but I found other books to be a bit repetitive.”

In 1995 he was based in the Sharjah offices, where he has been ever since, although he travels at least 50% of the time, to Algeria, Azerbaijan, Kazakhstan,

‘I try to help people resolve issues, and work with them rather than leading from the back’

wherever there is a need for his presence.

“From 1995 to 2000 we were looking for opportunities,” he says. “As a company you have to build a track record. Just doing one job in Syria, one job in Oman is not a track record. In growing a new business, you have to accept whatever you can to build a track record. The oil and gas industry does not want newcomers; they want credible players who can deliver. It is a different culture to Silicon Valley, which is much more accepting of newcomers. The oil and gas business looks for grey hair or bald people, because of the size of the investment the oil companies are making.”

By 2000, Petrofac had concluded many of what Marwan considers to be landmark deals on the company’s journey, including a $100 million deal in Syria in 1996; a $150 million project in Qatar in 1998; and the game-changing joint venture in 2000 with ABB Lummus Global to deliver the $600 million Ohanet gas development in Algeria. Now the company was in a position to take a more strategic approach, part of which included the acquisition of a business in Aberdeen, Scotland.

He thinks that one of Petrofac’s strengths has been its discipline over the years. “We can be aggressive if we understand the risk, but we don’t under price even if we do not secure enough business,” he says. “That is part of the selection process. If I understand my costs and the risks, it can work. In this business you always have the ability to say yes or no. You have to be disciplined and sometimes you will find that the opportunities are not real opportunities.”

Over the next couple of years he sees the bulk of the opportunities in the Middle East and North Africa. He also sees the real deepwater offshore potential in East Africa, but this is a bit further down the line. Petrofac has just won a deal in Germany to build a platform for wind farms and he hopes more deals in the North Sea, Sub-Saharan Africa and the Caspian will also offer potential in the medium term.

“The real shift at the moment is that 70 or 80% of our clients are national oil companies (NOCs),” he says. “We are also working for some of the IOCs, but predominantly our new deals are coming through NOCs. This is a real change in our business, and will continue. I think the next few years are going to be really exciting for Petrofac.”

What does he do when he’s not working? “When is that?” he responds. “With this kind of business you are always in contact with people and can never really switch off, especially with the kind of communications we have these days.”

Does he think there is too much email? “Yes, of course! You get a continuous flood and if you leave it for one day you get overwhelmed. I receive hundreds every day. There are about 15 that I need really to deal with, the rest are just copying everybody in, often to pass the buck!”

Of particular interest to him is the quality of people in his team and their productivity. He is determined to constantly evaluate the competency and efficiency of the staff.

“Can we recruit good people that fit in with the existing people?” he asks. “You have to be disciplined to attract the right people, but also be sure that they fit with the ethos. We have no specific directive of where we will recruit or what nationality recruits should be, we are open to all talent. We celebrate diversity, but there are challenges: how do you ensure that the diversity is working for you and not against you? We are also very keen to develop the people that we already have, but if we see the opportunity to hire from elsewhere we will, even if we don’t have a full workload for them at the point of hiring.

“One of our challenges is how to reward our staff. When we floated the company people made relative fortunes. How can we make sure people who joined after 2005 will be able to relive a similar dream?”

Marwan admits to no particular hobbies, or interest in any sport, or willingness to exercise, though he does “walk many miles around airports”. He reads avidly, mainly politics and biographies, while avoiding novels. And he cites his favourite city as being Paris, or Rome. “I feel at home in Rome, with Mediterranean people shouting at each other.”

He has three daughters. The eldest has recently joined Petrofac. Of the twins, one is doing chemical engineering and the other one, “the smart one, who is enjoying herself, is doing public administration”.

Home is Dubai, but he also has a place in Beirut and in the mountains in Lebanon.

Favourite food? “I eat everything,” he says with a laugh.

Finally, what would he say to a young person thinking about joining Petrofac now, perhaps his daughter when she finishes her engineering degree?

“I wouldn’t say anything to my daughter,” he jokes. “She certainly doesn’t listen to me.

“But what I would say to our young graduates is that they are very impatient for success. In this industry you have to be patient, you have to accumulate experience. Why? Because the work in this business is challenging and complex. In the oil and gas business you need a solid platform of experience to be able to do project engineering properly. I get it, young graduates are impatient, it’s only natural. However, my advice is that this industry pays off better in the long run if you are patient, unlike other industries such as finance, consulting or technology that appear better at the beginning. And this industry is here to stay, demand for oil and gas will grow, it’s an endlessly fascinating business.”

And with that, he gets back to work.

DEEP ROOTS IN OMAN

Petrofac is immersed in the here and now in Oman, honing in on delivering its contracts for a range of huge projects. Rupert Wright talks to those involved – and uncovers a deeper connection with this captivating country

In the last year, Petrofac won some truly giant projects in Oman. This follows a flurry of activity and commitment to investing in the Sultanate, which has seen Petrofac working on a total of nine projects today – three of which are on a grand scale.

The challenge ahead for the teams will be in delivering them all on time, safely and within budget. Not a new challenge by any means but one which Onshore Engineering and Construction's (OEC) Sunder Kalyanam as senior vice president with operational responsibility for Oman in his portfolio, wholeheartedly relishes.

"This is OEC's bread and butter," he says with a twinkle in his eye. "On a serious note, this is what we do best. The more challenges that come our way the more we raise our game. You hear people talk about Petrofac 'DNA', but you truly feel it when we are out in the field delivering projects."

One of the largest projects, announced at the end of last year, is a 50/50 joint venture with Korean based Daelim Industrial Co, awarded by Oman Oil Refineries and Petroleum Industries Company (ORPIC). The contract value is $2.1 billion, one of the largest oil and gas EPC deals ever awarded in Oman.

Located in the Sohar Industrial Area, 230 km north west of Muscat, the scope of work encompasses engineering, procurement, construction, start-up and commissioning services at the refinery. The contract includes improvements at the existing facility as well as the addition of new refining units.

The second deal, announced in February this year, is a $1.2 billion contract from BP for the central processing facility (CPF) for the Khazzan gas project in the Sultanate.

This project includes the engineering, procurement and construction of the CPF at the Khazzan field. The CPF will include

'One of the challenges of working in Oman is the sheer size of the country'

two process trains, each having a capacity of around 525 million standard cubic feet of gas per day. The project also includes an associated condensate processing system, power generation plant, water treatment system and all associated utilities and infrastructure. The project is scheduled for completion in 2017.

Hot on the heels of these, an award of an Engineering and Procurement (EP) contract by Petroleum Development Oman (PDO) was made to provide services for its Rabab Harweel Integrated Project located in the Harweel cluster of fields. The contract also includes construction and commissioning management support services with Petrofac providing full support to PDO during the construction and start-up phases of the integrated oil and sour gas facility. The total contract value is expected to be more than $1 billion, with around one-quarter of the revenues relating to professional services.

A welcome return

"These awards show that Petrofac is both successful and committed to Oman," says Mohamed Shindy, Petrofac country manager in Oman. "It shows that Oman knows that we will deliver on these projects and employ Omanis and contribute to the Omani economy. We are planning to establish a pretty significant presence in the country."

You might speculate that this is a new and exciting territory for the company, until you realise that Oman is really where the Petrofac story began. The company won its first contract here in 1988. Both Ayman Asfari and Maroun Semaan, the founders of today's Petrofac, spent many years here at the beginning of their careers, as did Marwan Chedid, chief executive of Engineering, Construction, Operations and Maintenance (ECOM) at Petrofac.

In 1991 Petrofac was invited to pre-qualify for the North Oman Crude Stabilisation (NOCS) project for PDO. There was a problem, however, as Petrofac did not have the financial muscle back then to take on, what was at the time, a massive $60 million project. Undeterred, the team turned to Galfar, one of Oman's leading construction companies, and formed a joint venture. Galfar brought the necessary financial strength and the JV was prequalified and invited to bid for the project.

Now more than 20 years later, and the company is back – and bigger than ever.

"Today we have nine significant project references in the country," says Mohamed. "Oil and gas developments have always been the primary drivers of economic growth in Oman. The government is investing in the industry and we are very involved in that. Oman is one of our top five countries. At the top of Petrofac there are people who both know and love the country; they have an emotional attachment to the place."

Petrofac is also expanding its presence in Muscat, in order to build a strong engineering delivery team in-country to continue to meet the demands of the country's oil and gas sector.

Elie Lahoud, project director for BP's Khazzan CPF project, has spent most of his 17-year career working for Petrofac, joining as a young engineer, and he has a strong foothold in the Omani market.

Technical training for the region

PHOTOGRAPH OVERLEAF: GEORGE STEINMETZ_CORBIS

In February Petrofac signed a joint venture with Takatuf Oman, a division of Oman Oil Company, to establish a training centre 30 kms west of Nizwa. This 'Centre of Excellence' will require an investment of about $70 million and will become the largest technical training centre in Oman.

"The aim is to train Oman's energy workforce to international standards," says Karim Osseiran, regional vice president eastern hemisphere Petrofac Training Services. "It is going to be the most advanced training centre in the region."

This is all part of Petrofac's aim to support 'In-Country Value' and build local capacity. Based on a two-year programme, the centre will initially take 500 students a year, with a capacity for 1,000. Training will focus on upstream and downstream disciplines covering operational, mechanical, instrumentation and electrical skills, technical HSE, English language and generic soft skills.

"As part of our effort to support Omanisation, the training facility is a demonstration of our commitment for the long-term," says Raffaele Foti, Petrofac's project director at ORPIC.

On a one-km-site, the training centre will consist of a main building with offices, learning laboratories and an emergency response centre. It will also have training workshops with industrial equipment, and a pilot training plant that mimics a hydrocarbon facility.

"We can simulate the separation process by using mineral oil, water and nitrogen," says Karim. "It is all about simulating real life experience on a hydrocarbon plant in a safe environment."

The programme will have two elements: the foundation part – for engineering skills and behaviour – and a second part which is discipline specific training, practical hands-on, mechanical electrical instrumentation and operation.

The centre will be a regional training hub, although the priority is for Omanis, any extra capacity will be marketed to other people in the region and beyond.

It is anticipated that the first intake will join in January 2016, and Petrofac's activities in Oman look set to keep the company busy for many years.

"There weren't that many young engineers in the company at that time. In fact, we were only several hundred staff, compared to the 18,000 today, so it presented a great opportunity for me," he says.

In 2004, he was part of the team that produced the proposal for the Kauther Gas Plant. When the bid was accepted, it was a welcome return for Petrofac, which had been out of Oman for several years. The company has been busy there ever since.

Elie adds: "We delivered the Kauther gas plant in 2007, then we worked on the Kauther depletion compression project, and now it is the Khazzan CPF. From a logistics point of view Oman is convenient for the Sharjah office and for the supply chain. We engage local resources wherever possible. Even before it became mandatory, we went local because it made business sense. By keeping the local community engaged, it makes the project easier, even just from a security point of view.

"There are two elements to the local content angle: the first is employing Omanis, a process called Omanisation. The second part is buying locally, and having construction done by local firms. Over the years, Petrofac has been consistently increasing the contribution of Omani staff and the local market in its projects both in the Sultanate and abroad.

"One of the challenges of working in Oman is the sheer size of the country. For instance, BP's Khazzan site is quite remote, with a journey time of up to six hours from Muscat." Elie recalls when he had to move two pressure vessels, each weighing 400 tonnes from the port to site and they couldn't take the normal route because of low bridges. The team identified another route, but it took in a mountainous pass. This required each vessel to have three trucks pulling with a fourth pushing from the rear to move through the steep terrain and get to site in time for construction. "It was nail-biting at times but I never doubted that we would pull it off. We had planned carefully. However the team sighed with relief when they arrived safely at site!" he says, mentally reliving the journey.

With an obvious enthusiasm and affection for the country, in Elie's opinion a key characteristic of the Omani culture is respect for others. This, he believes, lies at the core of the collaborative nature of doing business with all the entities in the country.

Meanwhile, away in another part of the country is the Sohar refinery project. Raffaele Foti is Petrofac's project director at ORPIC, working to improve the existing facility and additional refining units. Moving downstream is part of Petrofac's growth strategy. "This is our first really substantial refinery project," says Raffaele. "It's a joint venture with Daelim and it's an exciting opportunity for Petrofac; also for me."

Raffaele is based in Sharjah, Sohar and Seoul. "I spend half my time in each," he jokes. "We're really running and working hard, it's a tight schedule. But I like Oman, there is a lot of opportunity, not just in oil and gas, but also in infrastructure and development."

Construction on the new refinery will start in June or July, just as Ramadan and the summer heat arrive. It is a 36-month build schedule. "It's a tough schedule, but we'll do it," says Raffaele. "During this time we will be training Omanis to be welders, pipe fitters and other activities."

Another challenge of working in Oman is the variety of clients Petrofac is working with. PDO, ORPIC, BP and Oman Oil – each having different specifications and requirements. So how has Petrofac managed to be so successful?

"We hear it said that we are flexible, more hands on, we have a lot of experience in the country and we understand the culture," says Elie Lahoud. "The two Kauther projects showed that we could exceed expectations. Some may say it was partly luck that we have won all these projects; it helped that we were there at the right time, but I believe it is no coincidence. We have built a strong reputation for commitment and delivery and demonstrated many times that we can go the extra mile."

The Rabab Harweel Integrated Project is located in the south of Oman, a long way from Sharjah. Gordon Hunter is the project director of the enhanced liquids recovery project. He first worked in the country more than 25 years ago, so this marks a welcome return for him personally.

Maximum engagement

"Key to our success will be delivering 'In-Country Value'," he says. "We have developed a plan not only for training but also for local Omani development, not just people but maximising our engagement with local suppliers and manufacturers."

Under the four-and-a-half year contract, Petrofac will provide detailed engineering and construction and commissioning management support services on a reimbursable basis and procurement on an incentivised pass-through basis.

Even closer to Sharjah's headquarters is a $50 million contract with Oman Oil Company Exploration and Production (OOCEP). Petrofac will deliver operations and maintenance at two new production facilities on behalf of OOCEP, the upstream subsidiary of Oman Oil Company, the national oil company of Oman. One is at OOCEP's new gas plant in Bukha, Musandam while the other is at the Abu Tubul onshore development in central Oman.

"We're at an advanced state of mobilisation," says Martin Main, project sponsor of the OOCEP project. "We are actively seeking Omani talent so that when our part of the project finally kicks off, we're ready to hit the ground running."

THREE GIANT PROJECTS

$2.1 bn

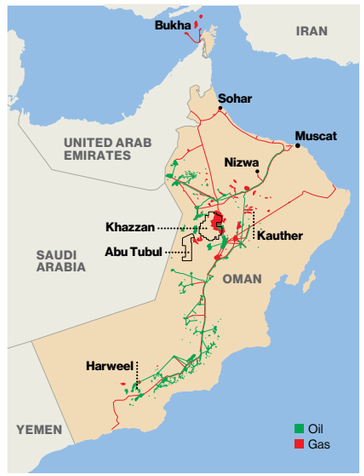
Sohar refinery project, a 50/50 joint venture with the Korean-based Daelim Industrial Co.

$1.2 bn

Khazzan gas project, a contract from BP for the central processing facility

$1 bn

Rabab Harweel Integrated Project, an Engineering and Procurement contract from Petroleum Development Oman



Petrofac has a range of projects in Oman spread around the country

SUCCESS OUT OF PRESSURE

Thanks to an industry shift from ‘ditch and replace’ to ‘monitor and maintain’, there has been huge growth in the testing and repair work of Scotvalve Services. Bill Moore reports. Photographs by Murdo MacLeod

A few miles outside Aberdeen, in a modern industrial estate surrounded by farmland and gently undulating fields, a powerhouse of the oil and gas industry goes quietly but confidently about its business.

Scotvalve Services, part of the Petrofac Group, specialises in the testing, repair and recertification of valves and pressure control equipment. This vitally important work takes at the company’s new purpose-built state-of-the art workshop.

Scotvalve is justly proud of its flagship site in Kintore, which occupies 4.4 acres and also comprises an office block and storage yard. It opened for business in February this year and the results have been immediate: new contract awards and a notable increase in output.

The high-spec 4,600m^2 workshop is the key to this growth. It’s the only one of its kind in the UK, and ranks among the largest in Europe. It has been specifically designed to accommodate the largest equipment in the surface and sub-surface industry.

Inside the workshop’s huge hangar-like structure, a tight-knit team of engineers and technicians inspect, dismantle, repair, test and certify well control products of all sizes and configurations. It’s work which often takes place around the clock to meet challenging client deadlines.

For Roy Burnett, Scotvalve’s director of oilfield services, the new facility is the realisation of a dream come true. He formed the company with his father-in-law in 1985 and they started out working from a small unit in Dyce, near Aberdeen airport. They were assisted by three technicians, all of whom are still with Scotvalve today.

From such modest beginnings do big businesses grow. The mid-90s saw Scotvalve extend its international reach. Its first overseas business was launched in Egypt and the workshop established back then is still one of the biggest in the Mediterranean/North African region.

As Scotvalve’s business grew, so did the need for bigger premises. This signalled an incremental expansion programme which finally saw the company outgrow Dyce and pave the way for the move to rural Kintore. Located just off the A96 (a major road heading north in Scotland), the chosen site ticked many boxes: it was easily accessible, three times less expensive than a city centre location, and the developer was offering an 18-month fast track development.

Left: Roy Burnett, director of oilfield services, and one of the company’s founders. Opposite: Ali Massie welds on a blow-out preventer body unit

The acquisition of Scotvalve by Petrofac in 2010 ensured the company had the financial muscle to build the new facility. In fact, Roy says Petrofac’s ownership has brought nothing but positives. “Being part of Petrofac has opened up new markets for us. The name Petrofac carries weight: it has credibility and gives Scotvalve added kudos. Apart from that, we have an excellent working relationship with Petrofac and they trust us to run our business the way we do.”

A tour of the new workshop reveals it to be a carefully organised workspace, meticulously signposted and spotlessly clean. A canteen, locker room and shower facilities provide the workers with everything they need without having to leave the premises.

The general atmosphere is one of calm, methodical concentration as technicians clad in red overalls work on every known variety of well control product.

Four overhead cranes – one of them able to handle 50 tonnes – allows Scotvalve to, in the words of Roy, “handle anything an oilfield can throw at us.”

He cites the example of a recently completed contract for the recertification of a BOP (blow out preventer) diverter sent from Brazil. The BOP weighed 35 tonnes. If Scotvalve hadn’t installed a 50-tonne crane, the job would have had to go elsewhere.

This ‘everything under one roof’ design has enabled Scotvalve to deliver a value-improved, end-to-end service.

Through a safety panel, Lee Piekarski operates a high-tech horrizontal boring machine. The company's 4,600m² workshop was designed to accommodate the largest surface and subsurface equipment

"We can offer what we call a turnkey service," explains Roy. "Machining, welding, fitting: all carried out within one single workshop. Our main drivers are quality and on-time delivery. Delivery is everything in our game. For example, we're dealing with products essential for the safe operation of rigs. These are a million-dollar-a-day rigs and any unscheduled downtime is costly. Our clients are reliant on us delivering a tight turnaround without compromising quality."

Scotvalve's growing reputation is leading to reciprocal growth in its global client base, adds Roy. "We're now providing services for companies as far afield as Brazil, Angola, Azerbaijan, Russia and Mexico. It would suggest we're delivering."

In a corner section of the workshop is a piece of equipment which truly sets Scotvalve apart from the local competition. It's Aberdeen's largest fully-enclosed gas pressure test pit. Measuring seven metres long, six metres wide and six metres deep, it has pressure test capability for 30,000psi and can accommodate a wide range of oil and gas pressure control equipment.

Currently undergoing inspection are two 18¾ BOPs – "the premier league, the biggest you can get", says Roy. BOPs are subjected to mandatory five-yearly recertification.

The test process is as follows: the pit is first filled with water, all 275,000 litres of it. Roy says that the workshop is self-sufficient in water. "We harvest rain water – a widely available commodity in Aberdeenshire! If we were to draw huge volumes from the water mains, local residents wouldn't be able to fill a kettle."

Once the pit is full, an umbilical pumps nitrogen (an inert gas) into each BOP, while an ROV (remotely operated vehicle) with fitted camera inspects each BOP from various angles, looking for any tell-tale bubbles which might indicate a leak. While all of this is going on, the hydraulically-operated roof of the gas test pit is closed as a safety precaution.

'Loyalty is important. Our first customer ever – job number 1 – is still a client today'

The inspection, repair, testing and recertification of valves and pressure control equipment accounts for 90% of Scotvalve's current activity. This includes a number of 'approved repair facility' and 'approved subcontractor' licence agreements with industry leading Original Equipment Manufacturers (OEM).

The remaining 10% is focused on a relatively new string to the company's bow: the in-house manufacture of products for the subsea industry.

The current range includes riser handling plates, prototype subsea wellheads and variations of MWD (measurement while drilling) components.

"We now have in place a contract to supply our new products worldwide through a major service company," says Roy. "This is a part of the business we're keen to grow. Our new workshop with its bigger machinery gives us all the additional capacity we need."

An important contributor to Scotvalve's growing success is the achievement of accreditation from the American Petroleum Institute (API), the internationally-recognised oil and gas trade association. This was granted in September 2013 following a stringent 12-month audit process. Or, as Roy puts it, "a year of blood, sweat and tears, but worth every single drop."

The accreditation covers three categories, enabling Scotvalve to manufacture and apply the API monogram to 12 well control product categories for the surface to subsea markets. "We're the only UK independent with accreditation in all three categories," says Roy. "This has undoubtedly helped us secure new business."

Looking to the future, Roy says further expansion is the aim. The Kintore workshop itself currently employs 57 people, many of whom work shifts. A further seven new vacancies are in the process of being filled.

Driving Scotvalve's expansion plans is the increasing demand for the company's services, which shows no sign of abating. Roy says this is largely attributable to the ramping up of deepwater drilling activity worldwide, as oil companies exploit the latest technological advancements to target oil and gas reserves previously considered inaccessible. With more deepwater drilling rigs being built, this means more high pressure well control equipment requiring Scotvalve's expertise.

The company also sends technicians out on location. A recent example was a contract in Denmark. Scotvalve supplied a four-man team of offshore technicians to build a BOP stack in sections on a quayside. The team then tested the BOP before it was crane-lifted onto its parent rig waiting patiently alongside. The round-the-clock job took three-and-a-half weeks from start to finish. "The successful outcome of this contract has led to additional work from the rig owner," says Roy, "so we're looking for further opportunities to send teams on location work."

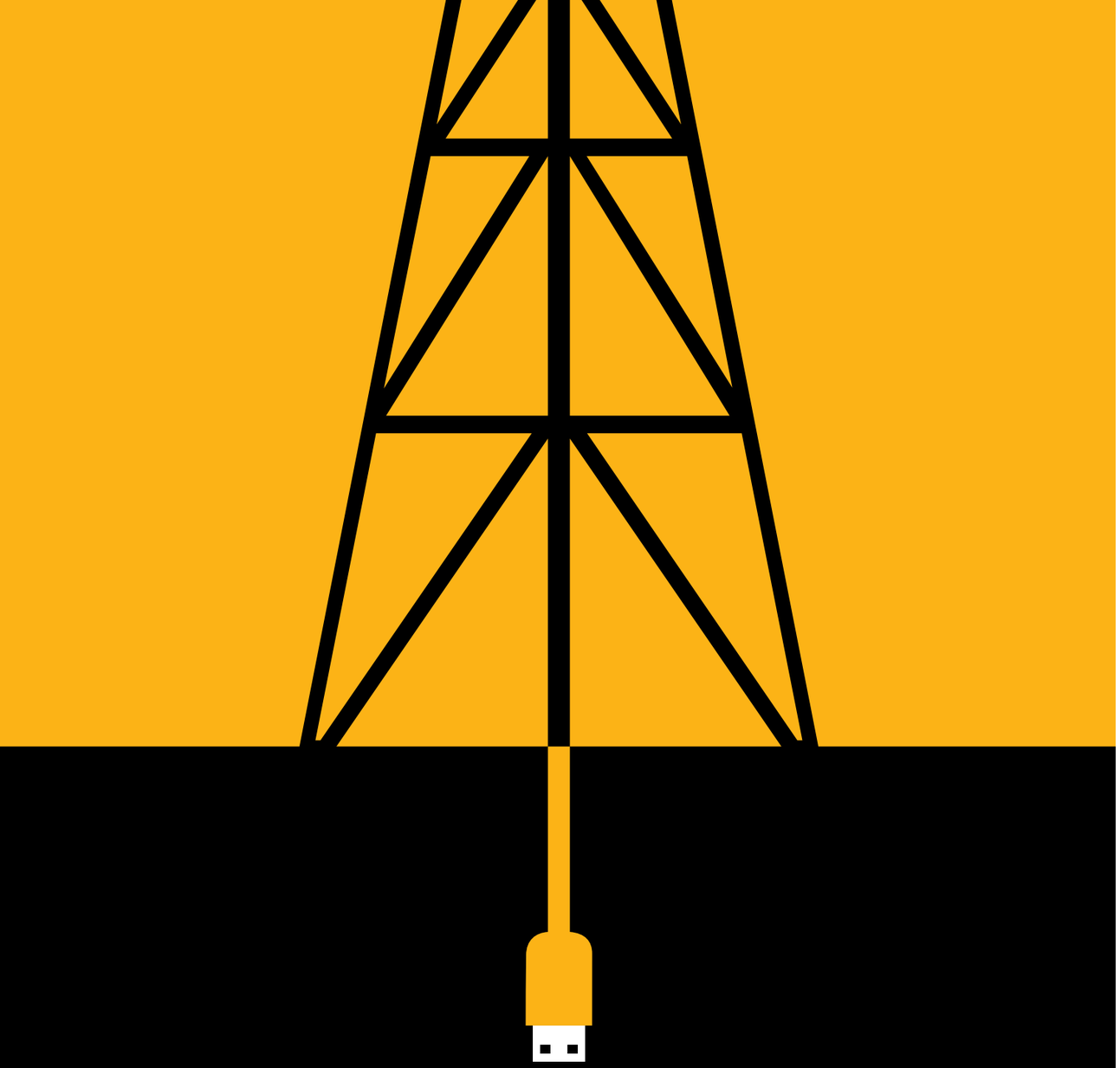
The way Roy sees it, success breeds success. The company which he formed with his father-in-law almost 30 years ago has survived three major oil price crashes in that time. While some competitors went under, Scotvalve continued to prosper.

Roy attributes this to many factors, not least a change in oil industry philosophy where the old motto of 'ditch and replace' has become 'monitor and maintain'. "This means companies need our value-for-money services more than ever," he says.

And customer loyalty and positive word of mouth are priceless. Roy says that North Sea workers who transfer to overseas posts continue to recommend Scotvalve's services to their new employers.

"That loyalty is so important to us," says Roy. " In fact, our first customer ever – job number 1 – is still a client today."

Opposite: Drained of its water, Ryan Ogg and Albert Black work in the test pit



DRILLING INTO HARD FACTS

Images of drilling are the most common illustration of the oil and gas industry around the world, but perhaps the most misunderstood. Today's well engineers work in a world where data and dialogue are as important as drillbits. Peter Halliday reports. Illustration by Noma Bar

What is your image of a drilling engineer?

If you are a film buff, you have plenty of personas to choose from. Maybe it is someone like the denim-clad roughneck played by James Dean in the 1956 movie *Giant*, who still features in so many advertisements for Levis jeans. Or how about Harry Stamper? Played by Bruce Willis, he appeared in *Armageddon*, the highest grossing film of 1998. He was described as "the best deep-sea oil driller in the world". Then of course there is Daniel Plainview, the dysfunctional miner turned oil driller in the film *There Will Be Blood*, whose portrayal earned Daniel Day Lewis an Oscar in 2007.

These are just three of hundreds of different examples out there. Generally they are unpredictable, larger than life characters, who throw caution to the wind, doggedly follow their gut instincts, and care little of what others think about them. So how does the stereotype measure up to reality? Who are the real-life "drill'n men" (and women)? And what value do they bring to an oilfield service business like Petrofac?

Perhaps the very first thing to get straight is the terminology.

These days we use the "d"-word quite sparingly. Instead, we talk in terms of "well engineering". This encompasses not just the physical toil of sinking and sealing a hole in the ground, but everything that goes with it – from the initial feasibility studies, to the decisions on design and engineering, to the resourcing and project management, to the completion of the well and the handover to the production teams, to the eventual abandonment.

For a business like Petrofac, these related disciplines are fundamental to the success of many projects. A good example is the production enhancement project in Mexico's Magallanes and Santuario oilfields. In redeveloping the reservoirs, the team chose to drill four horizontal wells, which was a 'first' for these fields. Although considerably more expensive than traditional vertical wells (at a cost of $4 million each compared to $3 million) these wells can be far more productive (yielding 1,000 barrels a day compared to just 250). It is approaches like this that have enabled Petrofac to lift production by more than 45%, increase drilling efficiency by more than 55%, and grow the known resource base by more than 10%.

Moving offshore, another example is Block PM304 off Peninsular Malaysia, which was originally classed as a marginal asset, and deemed too challenging to develop. One of the big difficulties was the complex geology, with the oil reserves scattered around many highly stratified

and compartmentalised formations. To enable the project to succeed Petrofac's geophysical and subsurface prowess had to be matched by a quick, accurate appraisal drilling and testing campaign. And several complex technologies (like conductor sharing and dual completion wellheads) have been used to optimise drilling performance.

Block PM304 is now one of Malaysia's most productive oilfields. From original estimates of around 12 million recoverable barrels, it is expected to yield some 200 million barrels. And well engineering is one of the disciplines to have contributed.

So what makes Petrofac different? Or better? It is a little like the success of the British cycling team at the 2012 Olympic Games. What was once a matter of pure physical effort and athleticism has been progressively analysed, systematised and professionalised. For example, the cyclists' helmets were re-designed to be more aerodynamic and alcohol was rubbed on the wheels to remove a tiny layer of dust and unnecessary friction. And thanks to this emphasis on marginal gains, the British team won seven gold medals while the rest of the world won just three.

Similarly, in the oilfield services business, data and discipline are becoming the differentiator. As hydrocarbons get more difficult to extract, as geographies become harsher, and as customers face tighter cost pressures, operational excellence makes the difference – and well engineering becomes another opportunity to set Petrofac apart.

It must also be remembered that, for many projects, drilling is the biggest single area of cost. And, of course, the quality of the well engineering has a direct impact on many other success criteria like non-productive time, installation lead-time and overall operational performance.

With this in mind, well engineering has become an area of focus for the Group.

First there is SPD, the specialist well engineering and project management subsidiary. The company was established in Dubai in 2002 and has also opened offices in Aberdeen, Auckland, Jakarta and Kuala Lumpur. Petrofac took an ownership stake in 2007 and acquired the remainder of the business in 2011. Over the years, it has delivered more than 180 wells for 100 operators across 50 countries.

Then, of course, SPD supplements the Group's wider well engineering operations across Africa, the Americas, Asia, Australasia and Europe. The IES technical centre, based in Woking, supports a global network of Petrofac well engineers. And, in 2013 alone, SPD and Petrofac delivered more than 85 wells at a combined cost of over $900 million.

FAST DRILLING FACTS

Petrofac has drilling operations in Africa, the Americas, Asia, Australasia and Europe. During 2013 alone:

- New drilling campaigns were initiated in Mexico, Romania and Nigeria – with no major drilling incidents to report
- More than 70 wells were drilled (both on and offshore)
- The average cost of each well was almost $5 million, representing a combined spend of $364 million
- The average depth of each well was 2,500 metres, with a total combined depth of more than 187,000 metres
- The deepest well, at 4,400 metres, was at Mexico's Magallanes field
- In addition, SPD project managed the drilling of 13 wells, with a combined spend of $537 million, and a combined depth of almost 37,500 metres
- The combined depth of all the wells drilled during 2013 is equivalent to more than 260 times the height of the Burj Khalifa – the world's tallest building

CENDOR'S COMPLEX GEOLOGY

Cendor is one of Malaysia's most productive oil fields

Malaysia's Cendor field development contract is unusual for several reasons – not least because the person heading up drilling operations is one of the industry's very few female drilling managers (the number of female drilling engineers is also small, but increasing).

Drilling and completions manager Karen Stanley started her professional career as a petroleum engineer. But, as the result of an internal reorganisation at a previous employer, she found herself seconded to drilling operations. "I wasn't best pleased at the time," admits Karen, "but it turned out to be a fortuitous move."

These days she is dealing with the complex offshore geology of the Cendor field, which is part of Block PM304 – originally classed as a marginal resource but now one of Malaysia's most productive oilfields. The wells she looks after are not that deep, typically up to 3,600 metres. And the technologies she adopts, although complex, are not that unusual. Instead, the big challenge is to cost-effectively extract the available oil from scattered locations amidst highly stratified rock formations. So, with two-to-three wells per conductor slot, large production holes accommodate dual completions, which reach down to multiple reservoirs with their own distinct characteristics.

To overcome the challenges she is continually analysing performance data, coming up with new and refined processes, and liaising closely with Petronas, the asset owner customer. She also draws on expertise from across Petrofac, and has outsourced her well assurance requirements to the specialists at SPD.

It is a challenging job and one she enjoys. "Many people still think of drilling as the down and dirty end of the business," she says. "But that is changing. Increasingly we see cyber rigs, smart completions and rotary steerable technology to drill multi-laterals and wells to depths of ten kilometres or more. That's a very long way from the drilling routines of the past."

All areas of Petrofac follow a common project delivery process, which is integral to a proprietary web-based software package called WellAtlas®.

Conceived and developed by SPD professionals, WellAtlas® provides an integrated way to plan and manage all well operations throughout their lifecycle. It brings greater efficiency and consistency to the Group, offers an up-to-the-minute view of the status of all the different well projects around the world, and allows for lessons to be learnt and shared across Petrofac.

It is also important to share data across the industry. So Petrofac participates in a global scheme called Rushmore Reviews, which contains the intricate details of more than 50,000 wells worldwide. By understanding the characteristics of nearby wells, it becomes easier to design, plan and price-up forthcoming projects. And, by following the progress of other players, it becomes possible to benchmark and progressively improve one's own performance.

Armed with detailed knowledge, and backed up by the Group's specialist expertise, costs can be reduced, non-productive time can be minimised, and drilling performance can be maximised.

So, when you speak to a well engineer about their day-to-day work, you are far more likely to hear about data and dialogue than muscle power and machismo. For example, they may be poring over daily drilling reports, or checking up on data integrity. They may be quizzing subsurface geoscience teams on the precise characteristics of the terrain. And, with a clear understanding of the details on the ground (and below it), they may be working on detailed designs, putting together definitive cost forecasts, selecting and managing the best qualified sub-contractors, or assembling project plans.

'Armed with detailed knowledge, and backed up by the Group's specialist expertise, costs can be reduced and performance can be maximised'

The IES technical centre, based in Woking, supports a network of well engineers

With this in mind, the combined expertise of the Petrofac Group is a priceless asset. As Payam Soleimani, a senior drilling engineer based in Woking puts it: "One of the great things about working in the technical centre is having access to the wide range of skills and experiences from different disciplines. Although we may be assigned to different projects, we share ideas. For example, as a standard step in our project delivery process, we organise workshops to listen to everyone's voice, put forward ideas, and identify all of the opportunities and barriers from all disciplines."

It is all a far cry from the personas of popular media. It may be a little less glamorous and a lot less eventful. But, when you think about it, this is probably a good thing for Petrofac's business.

WHERE WE WORK
WHEELS OF INDUSTRY

At the Sajaa Gas Plant in Sharjah, movement is the norm. While employees make their way around the extensive site on bicycles, production gas is being processed into sales gas, liquefied petroleum gas and condensate for export.

The plant is operated by Petrofac on behalf of the Sharjah National Oil Corporation (SNOC) and is a critical part of the United Arab Emirates' infrastructure, providing fuel for electricity from Sharjah's largest producing gas field.

The Petrofac multicultural and multidisciplined team is responsible for safely managing day-to-day operations, maintenance, project and support activities on the gas plant site and in the surrounding remote field areas.

Their strong safety culture contributed to the Sajaa asset's recent milestone of seven years and seven million man hours without a lost-time incident.

Photograph by Sam Robinson

Ten years ago, the Caspian Technical Training Centre opened its doors to a new generation of oil and gas workers for Azerbaijan. From 35,000 applicants, 900 have now graduated. Petrofacts talks to some of the pioneers. Photographs by Chingiz Samedzadeh

BAKU TO THE FUTURE

Most discussions with any newcomer to Baku soon turn to the skyline. It is impossible to avoid – physically and conversationally. Twenty years into the country's post-Soviet oil strategy, and it is writ large: with new roads, cars, shops, stadiums, and monumental buildings. The global architecture race has a new contender, with resources that match its vision and ambition.

What is less tangible, unless you look a little harder, is what has been taking place to equip new generations in Azerbaijan with the skills to flourish in this, its third wave of oil and gas development. The Caspian Technical Training Centre (CTTC), operated by BP, with technical training provided by TTE-Petrofac, epitomises that effort.

The industrial, arid backdrop of the BP-operated Sangachal terminal – a natural gas processing and oil production plant – provides the unlikely setting for such a fertile centre of learning and development.

The CTTC celebrated its 10th anniversary in May, while Azerbaijan's oil production has reached rates of around a million barrels a day in recent years. Ruslan Ibrahimov, operations manager at CTTC, explains why he and his team were proud to mark the milestone. "CTTC was set up to ensure that Azerbaijani recruits who were embarking on careers in these new oil and gas facilities would have the best skills and attitudes," he says. "I am in no doubt that our graduates have played a significant role in creating the prosperity that our country is beginning to enjoy."

The humble exterior of the CTTC hides a wealth of investment – from BP and its partners in the Azeri-Chirag-Gunashli (ACG), Shah Deniz, Baku-Tbilisi-Ceyhan (BTC) and South Caucasus Pipeline (SCP) projects, and from TTE-Petrofac, the joint venture that was awarded the training contract in 2004. That investment is financial, of course, but those with many years' experience at the centre all point to a less tangible source of success: a unique combination of the right facilities and programmes, and dedicated trainers and students. "You can sense a real hunger for knowledge and experience," says Ruslan. "Our recruits are committed to making the most of the opportunity they've been given."

The nationalisation goals were written into the production sharing agreements that were signed in 1994, and it is clear that everyone at CTTC has a sense of their role in this nation-building. But Ruslan prefers to focus on the individual. "Yes, of course, the CTTC is about helping BP fulfil its targets and develop its assets; and yes it is about helping Azerbaijan develop a skilled workforce," he says. "But, it is also about an individual's retention of skills, and their contribution to that bigger picture."

The CTTC was initially given an estimated lifespan of five years, which has already doubled. Major projects have kept on coming, and with exploration success, that looks set to continue. "The demand remains strong," says Ruslan. "More projects require more technicians."

Ruslan Ibrahimov
Operations Manager, CTTC

"You cannot make a good fire without three ingredients: you need an ignition source, you need fuel and you need air," says Ruslan. This is an analogy he uses with the new technicians at the CTTC, talking of a 'triangle' of partnership. "BP is the employer, responsible for their welfare longer-term; here at TTE-Petrofac, we begin that nurturing process; and of course they have the ultimate responsibility in how they use the opportunity."

While he is now in charge of the centre from a TTE-Petrofac perspective, Ruslan has his own story of development to tell.

Ten years ago, he was working for Petrofac at one of the intermediate pigging stations on the Baku-Tbilisi-Ceyhan pipeline when he was recruited to the CTTC as an HSE advisor.

He recalls: "I didn't imagine where I would be today, but every day that you do your job well, you expand your view of what's possible. And one day, suddenly, you find that you're in charge."

HSE is a topic still close to Ruslan's heart. "Oil has always been part of the national fabric here, but in those days, health and safety practices were less well known."

He explains how they used to recruit workers for the pigging station from nearby villages. "You could see HSE practices making a difference to peoples' lives on a daily basis, and when that happens, it's hard not to love your job."

That commitment to HSE is embedded into the CTTC progammes right from the beginning, even when the technicians are learning English in the first six months, and the centre has a safety record of which Ruslan is proud.

Ruslan smiles when asked if his family is proud of his achievements. He explains that his father ran his own construction company and had wanted his son to follow in his footsteps.

"When I started in oil and gas, of course my family was pleased," he says. "It meant I could survive. However, I have done my best to make sure it isn't just about surviving; it's about thriving. And today, my father is proud of me – even if he does still have a little moan from time to time."

'Every day you do your job well, you expand your view of what's possible'

Irada Suleymanova
Operations Team Leader at the CTTC

Irada Suleymanova is Ruslan's right-hand-woman at the CTTC – and throughout the day, there is a queue of people at her desk, with queries and problems to solve. She says that her job is to stand in for other team leaders when they are away, to be the filter for the operations manager and to fill in the gaps where necessary.

It is a job she relishes, treating every request with unflappable poise. Her dedication might be down to her involvement from the start – as an English teacher. "Although I had specialised in Russian at university, I realised that English would bring more benefits in the new era," she recalls. She admits that she was anything but unflappable in the early days. "I was so nervous on the first day that I struggled to put on my seatbelt in the bus," she laughs. "And I was so unsure of my English abilities with ex-pats that I actually stayed hidden in the classroom between lessons for the first week."

Irada explains that back then the team was building something from nothing. There were no computers or books, and the programmes were put together by those first trainers. "For each hour of teaching, we had two hours of preparation to do beforehand," she says.

The idea was – and still is – not just to teach English to the technicians. The programme is about communication, behavioural skills and above all, building confidence, says Irada. "It isn't about achieving a perfect score in grammar. It's about being able to say 'I don't agree' with confidence in a work environment."

She believes this kind of confidence is extremely important for a new generation of employees. "Many people come here not understanding how career progression works in practice, so our training focuses on building the kind of mindset where you believe you can really contribute no matter who you are."

The open-house events at the centre – which bring together former graduates with the new intakes – are an opportunity for Irada to see how people are progressing in their careers. "It's great to see how we are changing lives," she says. "And when people come back, they are always thanking us for doing so."

'It's great to see how we are changing lives'

Elbay Huseynov
BP Operations Discipline Advisor

"I'm sure I've thanked Irada in person for her teaching," says Elbay Huseynov, "But I would like to do it again, this time in writing." Now, an Operations Discipline Advisor (ODA) for BP at the CTTC in the next-door office to Irada, Elbay was among her first English intake in 2005. He is living proof of someone who is using that opportunity to the full.

His job today is to recruit and develop the next generation of technicians for BP's offshore, onshore and pipeline operations team. Back in 2006, when Elbay was graduating from the CTTC, he had a conversation with his-then ODA. Smiling, he says: "I shouldn't, but I'll tell you a secret. The ODA asked me where I saw myself in five years' time, and I'm a little ashamed to say that I said 'in your position, actually'." Exactly five years on, he took up the role as ODA. "It is exciting to be able to do for others what someone once did for you."

Elbay's unique name might lead Azerbaijani colleagues to believe he should have taken up a different profession. His grandfather on his mother's side was a well-known painter, and was close friends with a famous artist – Elbay Rzaguliyev – after whom Elbay is named. But he takes after his father, a retired oil and gas operations manager, who introduced his son to the oil industry at a young age.

"When my sister and I were little, we didn't have a big garden, so my dad used to take us to the communal gardens of his workplace so we could ride our bikes. I was about five years old when I remember seeing the nodding donkeys for the first time. We were always asking questions about the industry."

Answering questions and nurturing talent is now something that Elbay feels strongly about. "As a trainee, I found the CTTC foundation programme to be intense, but our trainers' commitment helped us through. And now it's become a habit for me to help with other people's development. There is a proverb that I like: the biggest room in the world is the room for improvement."

History is repeating itself, for Elbay has two boys of his own, Amin and Ali, aged five and six. "Sometimes I bring my BP manuals home," he says, "and now they're the ones asking difficult questions."

'The biggest room in the world is the room for improvement'

Ayla Dadasheva, BP Control and Automation Engineer

When I meet Ayla Dadasheva at her BP office in downtown Baku, she's instantly recognisable as one of the young graduates in the photos that line the office walls of the CTTC.

"I was 21 when BP made the announcement that it was looking for technicians in 2004," says Ayla, who now works as a control and automation engineer. "I was so keen to join that when I got the offer, it was like living my dream."

She talks about her year of study and work at the CTTC very fondly. "It did feel strange at first – arriving for security checks after a long bus ride to Sangachal – but I clearly remember entering the building. The four wings are named after the four big oil and gas projects in our country, which I liked, and everyone was extremely friendly – the CTTC staff, my BP discipline advisors and the other 30 trainees."

The programme was very intense, says Ayla, because you are becoming fully certified in just 12 months. Today's programme is six months longer. "There was a lot of studying, but it also felt like real work. We all appreciated the critical nature of what we were doing."

Ayla explains how their training took place in simulation workshops, with live plant. The CTTC has a unique operations training plant, and with Sangachal just next door, technicians get to grips with the potential hazards as soon as possible.

When asked if she worries about the hazards of the job, Ayla pauses and looks down. "A person who never worries about the hazards could overlook them. You should be always aware of what could happen if you don't pay attention." She reflects further: "At work, we call this risk assessment; at home, I call it common sense."

Like the other graduates, Ayla feels a strong sense of responsibility for her own future – and that of her country. "All the training in the world won't help you if you don't have a personal goal and drive.

"Ten years may have passed but it still feels like the early stages of my career," she explains. "I know I am using my skills for the benefit of BP, and also that BP is working for the benefit of Azerbaijan. That makes me proud."

'All the training in the world won't help you if you don't have a personal goal'

Tahir Tagiyev, BP Operations Discipline Advisor

"Our product is our technicians," says Tahir Tagiyev, who works alongside Elbay as one of BP's operations discipline advisors at the CTTC. "We are judged on the quality of those technicians who are employed by the various assets around BP Azerbaijan."

Tahir was one of those technicians himself nine years ago. Having graduated with a degree in physics and electronics, he says that the oil and gas industry was an obvious place to work.

"Oil and gas is part of our history, so it was not new to me. In fact, BP was not new to me either," he says. "As a student, I'd got myself a job as a security guard working night shifts at BP, so I had some idea of what the company was all about."

He remembers the optimism of his time as a fledgling technician. "It is usual for young people to have a vision of where they want to be – and I was no different. That vision opens up when you join a company like BP, and it is a huge opportunity that you need to use properly."

Like all of the graduates interviewed, Tahir still stays in touch with many of his fellow intake. "We keep an eye on each other's careers, and of course we often meet at various sites or contact each other for work reasons," he says. "Many of us are just close friends anyway."

'You feel an incredible sense of responsibility working in that environment'

That level of friendship is forged by the intensity of the experience – studying for long hours and working in pressured environments. It is training that Tahir believes is essential for life in the industry. "My first assignment was on the West Azeri oil platform which produces 250,000 barrels a day," he explains. "You feel an incredible sense of responsibility working in that environment, and you are away from normal life – and from home."

Today, Tahir is glad to see more of his family and enjoys spending time with them in Baku's new parks. "My children hear about BP and the oil industry all the time on the television," he says.

"I tell them that they should be proud that their country is supplying such an important product all over the world."

Elgiz Aliyev, CTTC Transport Co-ordinator

Elgiz Aliyev's mobile phone never stops ringing. In our short interview, it rings at least twice. "I'm sorry," he says, "but when I'm working, I can't turn it off."

As transport co-ordinator for the CTTC, Elgiz is responsible for everyone's coming and goings. That can mean anything up to 300 students a day, the hundred or so employees at the centre, and visitors from out of town.

It wasn't always this way. "To begin with, it was just me and Andy," he remembers.

"When TTE's Andy Buckworth arrived from the UK more than ten years ago, he needed a driver," says Elgiz. "I spoke no English at all at first, but Andy said I could work for him if I could learn some. So that night, I didn't sleep a wink: I was reading English magazines and books so I could at least say 'hello, how are you' when I met him the following day.

"And I became his driver for five years, and I thank him for that."

Since those days, Elgiz's responsibilities have mushroomed. Today, he is in charge of a fleet of 18 buses and seven cars and drivers – all of whom are constantly on the move, in and out of Baku, and to and from Sangachal.

The logistics are challenging, and as soon as he's finished safely manoeuvring everybody's whereabouts for the day, he starts his transport plan for the next one.

Despite the mobile phone pressures, Elgiz assures me that his job is easier today. "There is a system in place now. Back then, I worked very long hours with little break," he remembers.

It helps to have an understanding family too. "They know that this is my job, and I do get to go away on holiday for three weeks each year – and turn my phone off," he adds, smiling.

Elgiz is glad that his country is developing along with the oil and gas industry. "Everything is changing here in Baku," he says.

"Over the years, the terminal has got much bigger; we have many more buildings and roads in our city – and of course many, many more vehicles. I am very happy here: every year is better than the last year, and who can ask for more than that."

'Every year is better than the last year – who can ask for more than that'

BREAKING UP IS HARD TO DO

Bacton Gas Terminal has undergone several changes in its time, both before and during Petrofac's tenure. Helen Campbell talks to some of the individuals who have spent a large part of their careers at the terminal, as it nears completion of the biggest change of all. Photographs by Phil Sayer

Left: an original shutdown button from the 1960s was unearthed during the work. Right: Andy Barber, Petrofac's UK South and Renewables operations manager, oversees the decommissioning

WWW.CHPV.CO.UK

The history is evident at Bacton before the visitor even enters. “Petrofac?” queries the security guard at the complex next door. “Now, that’s an old name...”

In fact, Petrofac has managed part of the 45-year-old Bacton Gas Terminal on behalf of its owner only since 2003, but a large number of Petrofac’s Bacton employees have been there far longer. Now, as Petrofac’s first decommissioning job nears completion, Bacton is providing a blueprint and an excellent learning opportunity.

Situated on the UK’s east coast, on the edge of the little Norfolk seaside village of the same name, Bacton is part of Petrofac’s southern North Sea (SNS) business. The facility has been a central element of the UK’s gas infrastructure for over four decades, handling 1.2 billion cubic feet of gas a day at peak. In its heyday, some 30% of UK gas demand was flowing through the whole Bacton site, which at one time employed up to 500 individuals.

Bacton is in a peaceful and picturesque spot and has been a well-liked place of work for many for decades, even for those who have endured night-shifts as the east wind blew the snow at 2am... But gas markets are tempestuous and, in 2010, the owners took the decision to decommission and dismantle the Petrofac-managed facility. It was the end of an era, but it was also the start of a new experience for the company.

The gas that flowed through it from offshore fields including Hewett, Thames and the LAPS complex, was diverted on 17 August 2012 to a facility next door, where many of the Petrofac-managed facility’s workforce also transferred. The task of safely dismantling the tanks, the pipes, the pumps, the valves and some of the buildings commenced in May 2013, overseen by a small team of Petrofac employees.

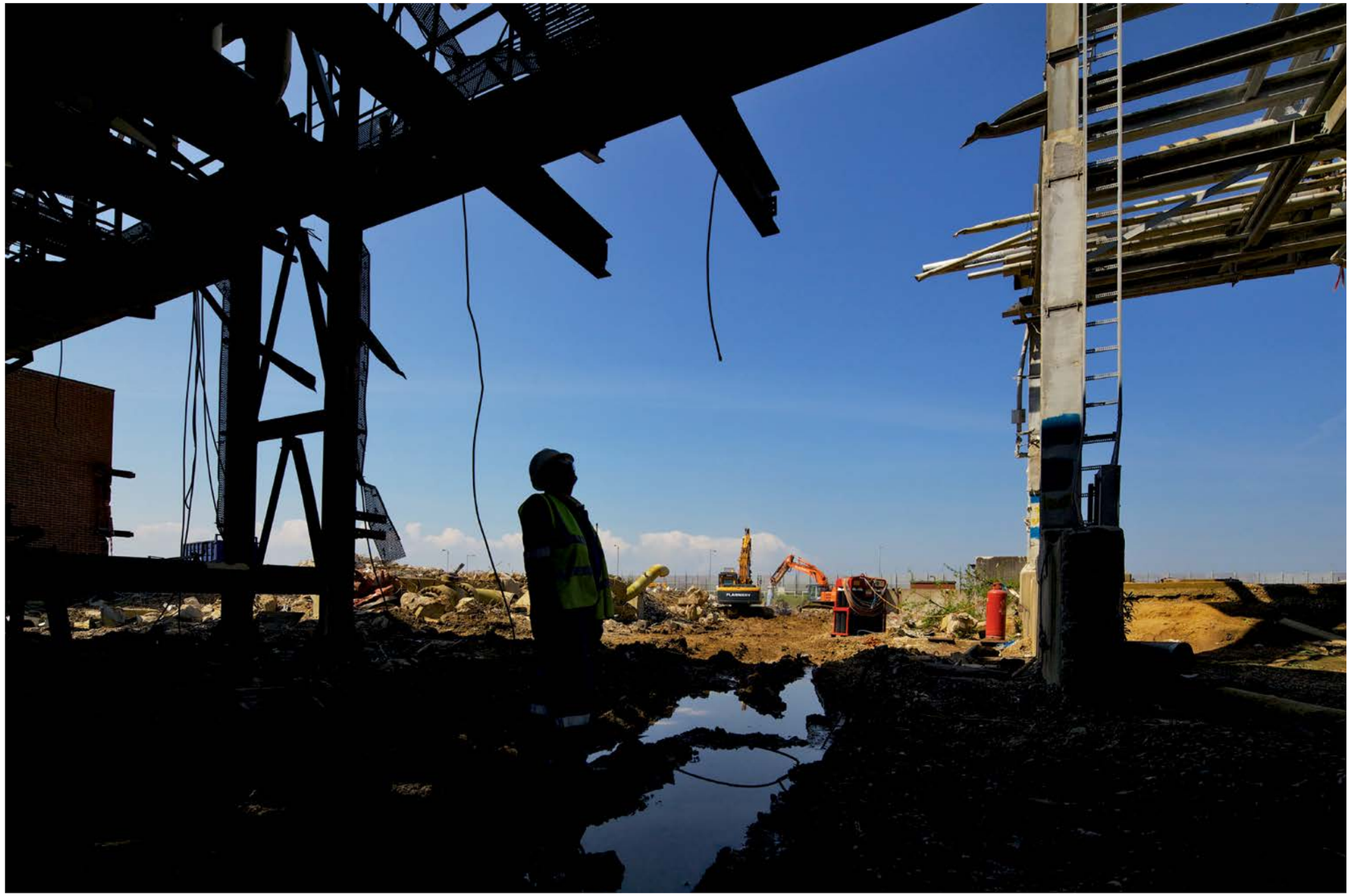
The Bacton site’s position next to two continuously operating COMAH sites (Control of Major Accident Hazards), and its own top-tier COMAH status when it received its last gas, meant the job of dismantling it presented plenty of challenges. The entire facility needed to be emptied of hydrocarbons and fully purged to render the site ‘clean and cold’ before the work began, and this preparatory period took two years.

“This is the first time in the UK that a gas processing site has been decommissioned next to a live COMAH site,” says Andy Barber, UK South and Renewables operations manager.

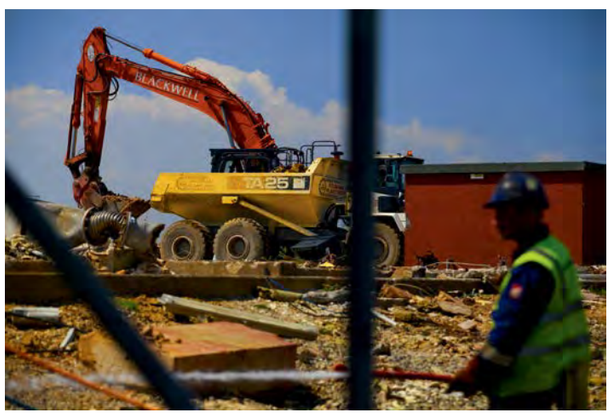
“First, we needed to depressurise the pipelines, pump all the liquids out and decant all the remaining gas. Then we purged the whole system and fully checked all the individual parts, inserting air gaps in many of the pipelines. We carried out repeated checks to be sure that there were no hydrocarbons left in the system, before we were satisfied the facility was in the required condition and could be cleared for handover to Masterton, our contractors.”

The dismantling work itself has been approached section by section, and the Petrofac team put in place a full set of proactive safety measures before the contractor’s seven mechanical excavators even arrived onsite.

“The site was split into six sections for the purposes of permit control during the



‘Watching the site being dismantled brings mixed emotions’



Top left: Bacton in its heyday. Above and below left: the dismantling work is approached section by section

dismantling work, and every task discussed in detail before the job started," says Steve Holmes, operations supervisor and a Bacton stalwart of nearly 20 years standing.

"Even now, with 90% of the job done, we still perform a gas test every single morning."

Many of the Petrofac team have been at Bacton even longer, and watching the site being dismantled brings mixed emotions. Steve Lawson began working at Bacton in January 1974 as a trainee operator under the then-owner, Phillips. He graduated through a number of roles, including senior operator and shift supervisor, to eventually become the site's safety advisor. Steve also worked offshore on some of the platforms feeding into Bacton and so has spent his entire oil and gas career associated with the site.

"Both the terminal and the offshore environment have always been good places to work," he says. "Everyone has had pride in all of the installations and what we were doing, and it became quite a personal goal to achieve our gas throughput targets every day!

"All the way through the 1970s, into the 1980s and the early 1990s, the complex was growing and expanding all the time. Like most people in the oil and gas industry, I like a challenge and can honestly say I have always enjoyed working here. It's been a big part of my life."

Staff have watched several families of foxes and rabbits grow up around the site over the years, and the facility even has its own resident tribe of feral cats. The fondness held for Bacton by Nigel Thompson, a multi-skilled operator at the site, is clear when talking to him, but perhaps even more so in the treasure trove of artefacts and curios collected from around the site and displayed on a shelf in the fire-pump building.

"I started here as a trainee operator in 1980," Nigel says. "I remember when the new computers arrived in the early 1990s and it was a big change to be able to press two buttons on a keyboard and make stuff start and stop! The other big events for me were the LAPS compressor installation and the gas first coming in from the Thames field.

"We always felt the strategic importance of Bacton as one of the three main gas producers for the country, and it's been a privilege to work here. We still learn things here every day, and Bacton has been a great training ground for people later going to work offshore.

"The day we switched the gas off, as it was transferred next door and everything went quiet, was a difficult one. Bacton has always felt like a second home and a second family. I have enjoyed every minute working here, and still do."

Among the items unearthed, literally, are the original shutdown button from the 1960s and a number of atmospheric old dials and other metering implements. Nigel has picked many of these up on his daily five-to-six-mile walkabouts around the site as he oversees the dismantling contractors. It's a place of memories, and the rusty twists of metal and the dirt on them tell the story.

The requirements of the dismantling task mean the site will be left clean, flat and safe and will continue to be monitored. The owners are yet to decide on the site's future usage, but a small Petrofac team is likely to remain on site until at least the end of this year.

"The job has gone well to date and, at the end of the process, we will be sharing our experiences, including the contracting strategy, the two years of preparation work and the actual implementation of the dismantling process with the wider community," says Andy Barber.

"Although we were able to learn from other industry examples, this has been the first time we have done this ourselves, and getting the planning phase right has made a big difference. We will be able to pass on a lot of this learning."

Above and right: the twists of metal have a story to tell. The requirements of the dismantling mean the site will continue to be monitored

'The day we switched the gas off, and everything went quiet, was a difficult one'

DOUBLE VISION

POST TO POST

Successful country managers need a real understanding of the country in which they are posted – no two are ever quite the same. Photographs by Jerry Balloch

AMMAR ISHAQ COUNTRY MANAGER, IRAQ

"It's a beautiful country," says Ammar Ishaq, Petrofac's recently appointed country manager in Iraq. "There may have been forty years of sanctions, war and civil war, but it's still a beautiful country with good people."

Ammar Ishaq believes that, despite the well-documented problems, Iraq has started on a more positive journey. "The process has at least started," he says. "And the fact that elections just took place is an incredible achievement really. There were lots of candidates, and most people participated. But of course, it will take time. An election isn't just about the numbers in Iraq – it is about negotiations, between different regions and towns, tribes and sects. That is the reality for an emerging democracy in this part of the world."

Ammar is from the north of Syria – not too far from Iraq – and shares a cultural understanding for his host country, where Petrofac is becoming well established. There is a permanent base – with offices and rooms – in Rumaila and a small office base in Basra. "We are working with both the IOCs and NOCs, with the aim of being here for the long term," says Ammar.

Petrofac is engaged in a range of projects in Iraq worth more than $1 billion. These include the recently completed Majnoon oil field project for Shell – on which Ammar worked as project director – and the maintenance contract for BP's giant Rumaila oil field. There is also an engineering, procurement, construction and pre-commissioning project for Gazprom on Badra, and a crude oil expansion project for Iraq's South Oil Company along with others.

'This whole country is in a continuum of development'

"I grew up in northern Syria, where the people are similar, and I know the region well," he explains. "Communication here isn't just about speaking the right language. You have to understand the culture deeply to work successfully in Iraq."

Ammar joined Petrofac in 1997, as an instrumentation engineer in the 'old' Sharjah office. "It wasn't my dream to become an engineer," he says. "But I know that it can give you a solid grounding for understanding what is going on in oil and gas. And from the beginning, I was always pushing to go to site. I wanted to see real things."

So Ammar worked on Petrofac's Dukhan facilities upgrade project, for Qatar Petroleum, from beginning to end. "In terms of gaining experience, working on a site is crucial, both on the technical and personal side of things," he says. "It is about developing the confidence to talk with people, meet clients face to face and resolve problems as soon as they occur."

There is plenty more experience to gain on the ground in Iraq, says Ammar. "The whole country is in a continuum of development, which means you have to deal with changing rules – such as customs and regulations – on a constant basis.

"And yes, there are security challenges, but we have strong security support, and take the right precautions. There is ground to cover, but I equate that with a lot of experience to gain."

Ammar is positive about the future of Iraq, and of the oil and gas sector. "Companies like BP, Shell, and of course Petrofac, are not only contributing to the development of oil and gas projects. I believe – through training and working together with Iraqi companies – we can have a positive impact on the development of people and society more broadly."

'It's important in this country not to take a short-term approach'

MOHAMED SHINDY COUNTRY MANAGER, OMAN

Whisper it quietly, but Oman is generally considered one of the plum postings within Petrofac. The country is blessed with a great nature, hospitable people and a heritage that reaches back over many centuries. It's a good place to work, but also a great place to live.

For Mohamed Shindy, Petrofac's country manager in Oman, it's the culmination of a career that started in Egypt, where he grew up.

Next stop was the United States, where he studied for an MBA and began working with Amoco. After Amoco became part of BP he moved first to Abu Dhabi, then to Sharjah, worked in London, and even spent time out on an oil platform called Lomond on the North Sea.

So how did he come to Oman?

"In 2007 BP won a concession in Oman, and I left the North Sea and became part of that team. For the next five years I worked on that project and built up a good relationship with the Government of Oman.

"The region that I eventually ran spread from Jordan to Pakistan, but I remained based in Muscat."

In 2012, after leaving BP, Mohamed joined the Government of Oman, where he worked as an adviser to the Ministry of Oil and Gas.

How did it feel to work for the Ministry itself?

"It was a great opportunity," he says. "Contributing to Oman's industry and people from the perspective of the Government was a tremendous experience and one that I'm proud of, especially having the opportunity to become part of Oman's team."

A year later, and he joined Petrofac. This entailed leaving Oman, but less than two years later he was back as country manager, with a mandate to integrate Petrofac's businesses, support their growth and establish new offices in Muscat.

"This is also a great opportunity not just for me but for the whole of Petrofac," he says. "It's a chance for me to use some of the lessons that I have learned from doing business in Oman over the last seven years.

"It is very important in this country not to take a short-term approach. The Omanis and the Government like to trust the counter party explicitly and be confident that they aren't just interested in short-term gains.

"Take that approach and it won't pay off."

The sort of approach that will be successful, says Mohamed, is delivering on what we promised; investing in capability, such as Omanisation (see page 14); and creating 'In-Country Value' for Oman.

"It's a mistake to see such investment as a cost," he says. "It's a source of value, that will pay dividends in the long run.

"You demonstrate beyond doubt that you care about the place and its people; and that you want to succeed, but you also want to help Omanis succeed. That is the key."

He says that one of the things he appreciates about working with Omanis is their natural commercial instinct.

"It's not just about one side winning or losing, it's about finding a good balance for both parties," he says.

"Omanis are instinctively great business people, they have a long tradition as a trading nation and they understand the industry very well; and amongst the Gulf Co-operation Council, they are pioneers in enhanced oil recovery as well as developing national talent.

"But they also appreciate that the best partner is the one that shares their long-term goals. There is a lot of potential for Petrofac in Oman and I believe together we can have a great future."

I ALWAYS CARRY... MY HYDROGEN SULFIDE MONITOR

Joselito S Jongay is HSSE senior advisor on a project in Abu Dhabi. He explains why his H_2S monitor is never far from his side at work. Photograph by John Bodkin

There are some things you carry with you because you like them, or because they help you do your job. But in the case of my small yellow hydrogen sulfide (H_2S) monitor, it could be a matter of survival.

As HSSE advisor on the Bab Habshan 1 project in Abu Dhabi, we are working in the vicinity of ultra-sour gas which has a high hydrogen sulfide content.

Hydrogen sulfide is a colourless, flammable and extremely hazardous toxic compound, which can lead to respiratory failure. While you can smell it – clearly and unpleasantly – in low concentrations, as it becomes more concentrated one of the side effects is a rapid, temporary loss of your sense of smell. This means that the gas can be present at dangerously high concentrations, with no perceivable odour. This unusual property of H_2S makes it dangerous to rely on your sense of smell to detect it.

All of us here are equipped with a personal H_2S monitor – and an emergency escape breathing device – to be used together should there be a sudden leak of H_2S. In the rare event that the gas is detected – which means it has reached 10 parts per million and above – our monitors will activate by giving off the alarm: a loud beeping sound, flashing lights and vibration. At this point, we would need to immediately don our breathing device, observe the wind direction and evacuate – either upwind or crosswind – to the nearest safe assembly area.

The monitor, which requires no sensor or battery replacement, is lightweight and can be worn at all times. The emergency breathing device uses a fail-safe pressure reducer, giving a consistent air-flow, while a combined diffuser and exhalation valve given an excellent air supply to the streamlined hood.

Both devices are very important parts of our daily working lives, ensuring that we return home safely to our families at the end of the working day.

Somewhere in the pages of this issue of Petrofacts, there is an H_2S monitor at work. If you can spot it, write to Petrofacts@petrofac.com giving the page reference, for your chance to win an iPod shuffle.

If you have an item which you take to work every day, which says something about you and your work, let us know, at Petrofacts@petrofac.com

Adrian Cobb specialised in avionics working on Apache helicopters before joining Petrofac

FROM FORCES TO WORKFORCE

Petrofac's forces transition programme is a great opportunity both for the company, which is tapping into the armed forces to address the skills shortages, and for those who have served their country, to start a second career. Ian Forsyth reports

Being targeted by Taliban militants is just part of a day's work for the British armed forces serving in Afghanistan. Ex-RAF serviceman Robert Hutton, 31, experienced several rocket attacks when stationed at Kandahar airfield a few months ago – and one came frighteningly close.

The former avionics supervising technician explains: "This rocket came in and exploded just a couple of hundred yards from me. My safety training immediately kicked in. I dropped to the deck, covered my face and stayed in that position for two minutes. I was obviously scared, but I couldn't show any fear at the time as I had two young lads along with me. They were taking their lead from me."

Thankfully, Robert arrived back from Afghanistan in one piece in February and he is now embarking on an exciting new career in the North Sea oil and gas industry. He is one of eight highly skilled ex-forces personnel recruited by Petrofac for a pilot programme which started in March.

Skills shortages

The forces transition scheme was developed following three major operations contract wins for the company in the North Sea – with GdF Suez in Cygnus, with Ithaca Energy in Greater Stella and with EnQuest for the Alma/Galia project. Skills shortages in the oil and gas industry have been well documented in the media, with recent projections including one that Aberdeen alone will need tens of thousands of new recruits in the next few years. Energy companies are using a variety of methods to recruit new employees, such as looking to other industries where workers have similar skills.

Petrofac believes the forces transition initiative which uses the expertise of Petrofac Training Services and the Engineering Construction Industry Training Board will help efforts to bridge the gap. The company already has schemes for graduates, trainees, marine cadets and apprentices.

Walter Thain, senior vice president Europe at Petrofac Offshore Projects and Operations, explains that the company already employs a number of ex-military people, but this was its first forces transition programme for skilled entrants. "We need 150 people in the next 12 months to fill roles in these three North Sea contracts," he says. "These ex-military personnel are skilled, well trained and are used to working in harsh environments."

Robert Hutton, who was based at RAF Lossiemouth in Scotland, spent 12 years in the armed forces. He had worked on Tornado aircraft since joining up, but the squadron was being disbanded and, if he'd stayed on, he would have had to retrain for Eurofighter aircraft. He says: "I thought this would be a good time to try a new career."

So why oil and gas? "It just seems to be where the technicians leaving the RAF are going. Some of my former forces colleagues are already in the industry, and joining Petrofac was a good career move for me."

Safety focus

Adrian Cobb spent seven years with the Royal Electrical and Mechanical Engineers in Ipswich specialising in avionics and working on Apache helicopters. While used to working with electronics, it was the scale of the oil and gas industry – and the focus on health and safety – that came as a surprise during training. "Safety is of course important in the army, but it was stressed even more by our Petrofac trainers. We've now got some understanding of what's involved, and I'm looking forward to working on the rigs or elsewhere," he says.

"We'll certainly cope quite well with being away from home," he adds. "On one tour, I spent more than six months in Afghanistan, so it'll be great to have a couple of weeks' leave on a more regular basis," he says.

'Their training, will to succeed and desire to get things done are attractive to the company'

Andrew Ferguson, vice president operations, says the new recruits had previously worked as instrument technicians with the British armed forces and the plan was that, within 12 months, they would be fully qualified oil and gas instrument technicians. After an initial eight weeks of onshore training at the Petrofac Training Services facilities in Aberdeen and Montrose, they will be ready to work in the North Sea for Petrofac Offshore Projects and Operations.

Rob Hutton starts his training

Andrew explains that Petrofac has recruited people from outside the industry for many years. "Ex-military people have done very well for us. Their training, will to succeed and desire to get things done are attractive, and they could rise to top roles."

Army Lt Col Paul Binnie, commanding officer of the Aberdeen universities officers' training corps, expressed his thanks to Petrofac for realising the value of the skills sets possessed by ex-forces personnel. Petrofac's commitment to the forces transition programme is supported by funding made available by Skills Development Scotland from the Energy Skills Challenge Fund.

LOGIC PUZZLE

THINK INSIDE THE BOX

Can you come up with the solution to our logic puzzle – and win yourself a prize?

We've recently received news from the construction team. Three specially sealed crates of components have been delivered to a construction site – but unfortunately, all three have been incorrectly labelled.

One crate contains only bolts, one crate contains only screws, and one contains both bolts and screws. But the crates have each been incorrectly labelled; no label correctly identifies the contents of its crate.

The site teams do not want to open up all three sealed crates, but they do need to relabel the boxes correctly before sending them on to the construction teams.

However, there is an easy solution. By taking one component from one crate, it is possible to correctly identify the contents of all three crates.

How is that possible? How, by removing and looking at one component from one crate, can you identify the contents and correctly relabel all three crates?

For your chance to win one of five Apple iPod Shuffles, please email your answer to Petrofacts@petrofac.com. Closing date for entries is 1st September.

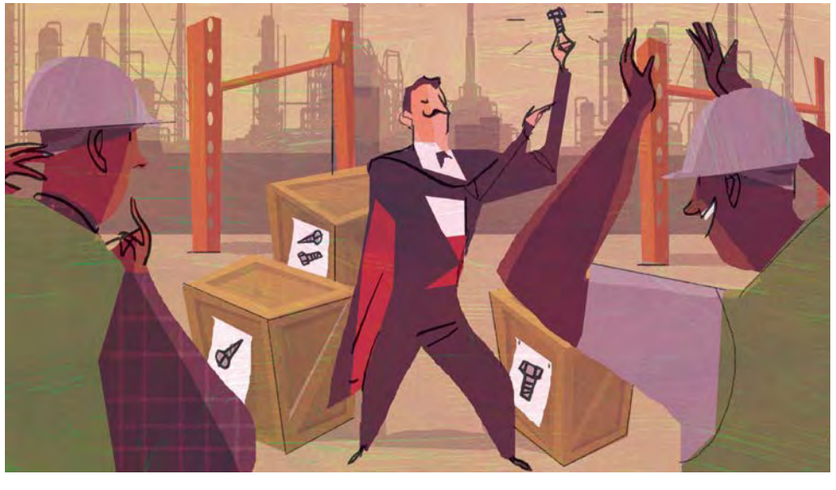


ILLUSTRATION BY A.RICHARD ALLEN

CONSTRUCTING A GREAT CAREER

Whether it's assembling a team, building Mexico's first deepwater subsea project, or shaping his own career, John Harney's construction skills come to the fore

If careers were measured in numbers, John Harney would be scoring pretty highly: in a career lasting more than 40 years so far, he has worked in 22 countries on five continents, covering onshore and offshore oil and gas facilities, a power station and a mining plant.

John has worked on several mega projects such as Cantarell in Mexico, Nanhai in China, and Tengiz in Kazakhstan. But he singles out an earlier project that taught him the importance of being adequately qualified for the job you take. "I was 32 when I was promoted to site manager on a gas plant in the Australian outback," he explains.

"There were some difficult times – involving 750 Australians, a strike, and problems with gas supplies in Sydney – and I realised that I needed far more than just a technical education to succeed, so I saved up to take an MSc in Engineering and Construction Project Management which gave me a much more rounded set of abilities."

In terms of construction, there isn't much he hasn't done – underlined by the fact that he was appointed as a Fellow of the Institute of Mechanical Engineering in 2012. It is fitting then that his current job is deputy project manager on Mexico's first ever deepwater subsea project, called Lakach – which means 'all' in the ancient Mayan language. Petrofac was awarded the technical assistance and supervision work on Lakach by PEMEX in early 2013 – following its earlier success with winning onshore contracts two years before that.

The Lakach field, discovered in 2007, holds more than 850 billion cubic feet of gas. Petrofac is providing specialised technical assistance and supervision for the construction, installation, commissioning, testing and start-up of deepwater subsea wells and infrastructure.

John says that the most rewarding elements of this role are the need to build a fully international team of multi-discipline experts, and the excitement that comes from working on such a high-profile project. "Our support for PEMEX goes across all disciplines, and it's important to make people see that they don't work in a vacuum. Everything is interlinked so we have to consider everything, for example even down to contingency plans for the hurricane season two years before we even go offshore."

'It's important to make people see they don't work in a vacuum'

Football team

In outlining how he is putting his team together, John uses a football analogy. "You need all the different types – from goalkeeper to centre forwards; a mix of disciplines and personalities. Soon we will have contractors working in six countries, and our team already has staff from Peru, Brazil, Cameroon, India, the USA, the UK, Germany, Poland, Venezuela, Colombia and of course Mexico. Every day there is something new as a contract evolves, and experienced construction input can make the difference between project success and failure."

Mentoring is something that John takes very seriously. "This is something I've always enjoyed. Construction is a highly skilled, responsible job, but today it can be difficult to attract young people into the industry: many are attracted by careers in finance – for example, two of my own three children are, but the youngest one quite likes engineering, so I'm hoping that he will join me."

Recruitment strategy

From his office on a beach in the Yucatan peninsula, John explains his recruitment strategy. "It isn't about building a perfect 'Petrofac' team at the beginning; it is about bringing in individuals with the relevant experience who will work well on this particular project, in this particular location and become a cohesive team."

This refusal to pigeonhole people (or himself) is perhaps one of the reasons why John jumped at the chance of moving to his new project – in a completely different business unit of Petrofac. His early roles with Petrofac had all been with Onshore Engineering and Construction (OEC): in the five years since he joined, he has worked at Harweel in Oman; in Sharjah as construction services director; and now, he's working on an Engineering and Consulting Services (ECS) project.

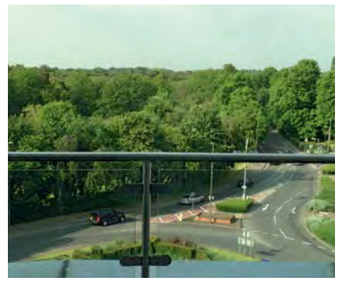
"It feels really good to have been given this opportunity, and I know that there are differences between OEC and ECS, but these differences are small. Changing business units is really no different than changing companies, but with the huge advantage of being able to go back to previous colleagues and ask for support. For me, the secret is to be flexible, have an understanding family, and to keep learning across all disciplines. There really is no other career to match construction."

AROUND THE GROUP

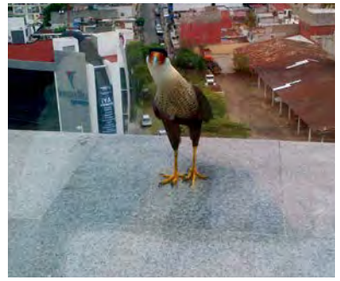
VIEW FROM MY WINDOW

With offices, facilities and sites around the world, it should come as no surprise that the views which Petrofac employees have from their workplaces are as varied as the people and places themselves...

Woking
Amanda Kavanagh, PA
We have a stunning view of Horsell Common, made famous by H G Wells in *War of the Worlds* as the site of the first Martian landing. A few of us enjoy running on the common during our lunch breaks.



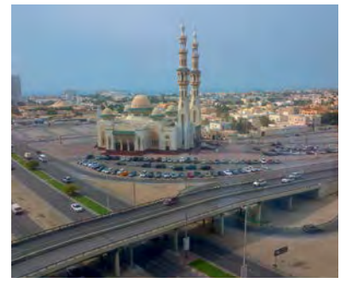
Villahermosa
Miguel Cervantes, purchasing supervisor
This bird of prey is a regular part of the view from meetings on the 5th floor of the DG Building, Villahermosa. I believe the English name for it is "crested caracara".



North Sea
Colin Broome, deck crew painter
Our platform is way up north, 40 minutes from Scatsta in the Shetland Isles, by fixed wing plane from Aberdeen. I've been a deck crew painter for 4 years now.

Singapore
Maria Andoko, management accountant
Our floating production office is adjacent to the mass rapid transport track; the sound of trains passing every five minutes has become music to our ears.

Sharjah
Richard King, integrity assurance
The beautiful Al Huda Mosque; beyond that the suburb of Al Khaledia and the Arabian Gulf. I really enjoy being reminded of the culture and history of the place I currently call home.



Milan
Carlotta Brera, office manager
Our operations centre in Europe is located on the first floor of a new building in the business area of Milano. We can enjoy this view every time we want to recharge our batteries.

Rumaila
Ajeesh Gopi, operations support manager
A cloudy evening view from Petrofac Rumaila Camp in Iraq. The view is from the accommodation block where we sit and have fun in the evenings; our office is on the right.

Malaysia
David Fisher, operations manager
We are in start-up mode of an operation and training management project at the Gem Beach Resort, Terengganu, Malaysia. It really is more of a hardship posting than first appears!

In the next edition, we'll be looking for what's occupying your reading time around the Group – whether it's a newspaper, magazine, book or e-reader, please send a photograph and brief description of what you're reading to petrofacts@petrofac.com, to arrive before September 2014.

STEP UP FOR THE EVE AWARDS

This month sees the launch of the fourth annual EVE Awards. Awards' ambassadors are spreading the word in their respective regions and 'talent-spotting' to help find this year's nominees. Could you be on the winners' podium?

The EVE (Excellence, Values, Energy) Awards mean it's time to start the search for individuals and teams who live and breathe Petrofac's values, and this year you have the chance to vote for a winner.

Inviting entries in six original categories – safe; ethical; innovative; responsive; quality and cost-conscious; and driven to deliver – the awards recognise those who embody the company's values. Reflecting an ever-rising quality of entries, these categories will this year be judged by functional specialists. In addition, every individual in the company will be able to cast their vote in the new People's Award. Finalists in all categories will be invited to an awards ceremony during the Leadership Conference in Barcelona this November.

Exemplifying values

More than 65 regional 'EVE Ambassadors' have been appointed this year to increase awareness of the scheme in all regions where Petrofac operates. They will also scout potential entrants and provide support during the nomination process.

Some of the ambassadors are former winners or nominees and are well-placed to promote the awards in their respective regions.

"There are some fantastic things going on across the organisation and we want people to be able to share in the knowledge and energy generated by the awards," says Gwen Folland, head of government and stakeholder relations, and who leads the scheme. "As well as encouraging prospective entrants and supporting applicants, the ambassadors will be holding local events to recognise the achievements of entrants who don't necessarily make it to the final."

Gordon McLeod, vice president for Petrofac in the Americas, is spreading the word in the US. "This is an excellent programme to build morale, to reward outstanding performance and to increase understanding of Petrofac's core values," he says. "I think we often try to minimise our own success, and I would encourage everyone to consider their achievements in light of any obstacles overcome, the impact on our business, any innovative aspects and, in particular, aspects that exemplify our values."

Encouragement is also offered by Nur Ainiza (Niza) Binte Mohd Yatim in Singapore. As HR advisor for Petrofac South East Asia, Niza was nominated in 2013 for the 'driven to deliver' category, for her efforts reaching out to staff, often outside normal working hours, on the Berantai floating production, storage and offloading project. Although not a winner, she was 'honoured' to have her efforts acknowledged.

'This is a platform for you and your team's work'

"Nomination in these awards gives a real sense of achievement and an intangible bonus of recognition at a much higher level than just your own team," she says. "To anyone considering entering, this is a platform for you and your team's work to be an inspiration to the rest of Petrofac."

Nahida Basu, senior HSSE and social advisor in Sharjah, UAE, previously entered as part of a team in the 'ethical' category. She believes that the awards boost output and morale. "I think that when people see others being rewarded for implementing our values, it encourages them to do the same," Nahida says.

And Petrofac employees in the UK Southern North Sea (SNS) business, based at Great Yarmouth, should keep a look out for Claire Daniels, who plans a push for EVE participation from the SNS business and especially the offshore teams. Claire, PA to Petrofac's director of UK South Operations, says: "We have fantastic people at Bacton and Great Yarmouth, and there is a lot of great stuff that happens in this area. The EVE Awards are all about people being proud of what they do and we want people to shout about their achievements. I will be going out to meet people on the platforms if I can and, if not, I will go and see them at the heliport."

Apply online

Dnyanesh Kamath, HR and organisational development leader in the Mumbai office, has already enjoyed the buzz of EVE recognition as an 'ethical' category finalist in 2011. "My team entered in recognition of the huge increase in participation by Petrofac employees in the annual Mumbai Marathon, through which we raised money used to support our local CSR activities," says Dnyanesh.

The EVE Awards are open to Petrofac's employees across the world. Entrants can self-nominate or can be nominated, and apply on an individual or team basis and can apply online via the specially created website. If you think you have what it takes and would like more information, visit the link on Petronet, the Petrofac intranet site. You can also contact your local EVE Ambassador direct once the website is launched or the EVE team in London – Gwen Folland, Ann Whatley and Lucy Pinkstone.

WISDOM IS THE KEY TO SUCCESS

Women In Support of Development Opportunities and Mentoring (WISDOM) is a programme launched in Saudi Arabia in 2012

"Women should support women," according to Hind Al-Zahid, manager of the Businesswomen's Centre at the Saudi Arabia Chamber of Commerce.

This rallying cry was made during a lecture at Petrofac's Saudi office where she stressed the essential role of working women in the Saudi economy. Her audience was a group of ambitious young women – all employees of Petrofac and all participants of the WISDOM programme.

WISDOM stands for Women In Support of Development, Opportunities and Mentoring, and was established in 2012 by Ruba Al Zeer and Nura Alsakar. As Ruba, a project engineer based in Sharjah, explains, "The inspiration for WISDOM was born out of Petrofac's response to the 'Davies Review on Boardroom Diversity' which is to have 15% female representation in the boardroom by 2013 and 25% by 2015. It was launched at the Sharjah office on International Women's Day and more than 60 ladies attended, which is a clear indication of the level of interest."

'The speakers are very willing to volunteer their time and experience'

Saudi Arabia was chosen as the pilot location for the WISDOM programme, which aims to equip women with the necessary skills to take on senior management roles within the company. This is achieved through lectures and workshops led by prominent Saudi women, such as Hind Al-Zahid, on topics that range from how to achieve success to how to manage money effectively. The speakers act as role models and mentors to the WISDOM group, giving participants the opportunity to expand their network of business contacts and encouraging them to chase their ambitions.

Nura, the CSR assistant for the Saudi office, is excited to share how successful the programme is: "The participants suggest names of female leaders and ask me to arrange meetings. The speakers are very willing to volunteer their time and experience, plus the local community is really supportive. We also have the backing of branch management, which helps us move towards our goals".

One of these goals is to apply for a Catalyst Award, which recognises initiatives that address the recruitment, development and advancement of women. The WISDOM team is certainly on the right track, having already been finalists at the CSR Peer Awards in London. Ruba says: "The biggest success is not only seeing how the programme delivers information and opportunities for improvement, but seeing how it publicises the reputation of Petrofac. We are looking forward to seeing WISDOM shine."

From left: Nura Alsakar, Gwen Folland, Ruba Al Zeer and Nouf Al Hamoudi

MY WORLD

LAKSHMI VENTAKESH

In the first of a new regular feature, Petrofacts asks employees to provide an insight into their world. This issue, meet Lakshmi Ventakesh, general manager of Petrofac Engineering Services in India

You arrive at a party; how do you describe what you do to a stranger?
I head up the Petrofac engineering office in Delhi. This includes all disciplines like piping, civil, electrical, instrumentation, process and mechanical. We have close to 400 people in the office and hope to grow to 500+ by the end of the year.

Apart from your present location, where would you most like to work and why?
If we open up an office in Singapore I would like that. It is a beautiful city, small, multi-cultural, well organised and efficient. It is cosmopolitan yet Indian enough so that I don't miss my roots.

What was your first ever job?
My first job after graduating in chemical engineering in 1983 was with Larsen & Toubro Ltd. I was the first woman to join their chemical business; I worked in their R&D centre in the equipment group. A woman in those surroundings was quite a rarity then and I would be openly gawked at.

Which app or new technology has changed your life, and why?
I think the smart phones changed the way we function. The distinction between work and home blurs, you are constantly aware of what is happening at work even when you are not at your desk.

How would you answer the question: "Petrofac? What do they do?"
No we don't sell petrol, but yes we are in the oil business.

Is it better to start work early, or work on late?
Irrespective of when you come in to work you end up sitting late in Petrofac. I find it difficult to get in early, so I prefer working late.

Mac or PC?
My son uses Mac; I use PC, which just about sums up the generation gap.

What do you most admire in a person?
I admire people for their negotiating skills, I am amazed by people who bargain hard and long and get what they want without upsetting the opposite party or losing their respect.

What's your idea of happiness?
Happiness is getting a difficult job done well. If you get recognised for it then that is the icing on the cake.

What's your idea of misery?
Misery is standing in the Mumbai rains with wet clothes trying to flag down a taxi to get you home. Then getting into it and being stuck in the traffic for hours.

'Happiness is getting a difficult job done well'

What did you want to be 'when you grew up'?
In my early years, studying in a Catholic school in Calcutta, I wanted to be like Mother Teresa; then when I was a little older I loved mathematics and thought I would be a maths teacher.

What do your colleagues not know about you?
I am a trained classical dancer. I learned an Indian dance form called Bharatnatyam for over 18 years, more time than I spent studying engineering. I have given several public performances and also taught dance. My last performance as a dancer was in 1994 and as a "guru", conducting my students' performance was in 2005. Since then, I have been content being a spectator.

Where was the last place you went on holiday?
The last holiday we had together as a family was in Thailand.

Tell us a joke
A man goes to the doctor and says, "Doctor, wherever I touch, it hurts."
The doctor asks, "What do you mean?"
The man says, "When I touch my shoulder, it really hurts. If I touch my knee – it hurts! When I touch my forehead, it really, really hurts."
The doctor says, "I know what's wrong with you – you've broken your finger!"

Picture Petrofac winner Ian Chalmers snapped this cyclist on U Bein Bridge in Mandalay, Myanmar. This year's competition is well under way, closing in July

Success under pressure
'Delivery is everything in our game'

Drilling into hard facts
'For many projects, drilling is the biggest single area of cost'

Baku to the future
'It's great to see how we are changing lives'