

bp and the Sultanate of Oman

A long term partnership that continues to strengthen

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There are some relationships that just get better with age, that deepen as each side learns more about the other. Such is the relationship between bp and the Sultanate of Oman – a partnership almost a century in the making.

It began in 1927 when the company's founder William Knox D'Arcy was granted a two-year exploration licence. A decade later, bp became a 23.75 per cent partner in Petroleum Development Oman and Dhofar and later went on to build a substantial network of petrol stations (no longer in service), alongside a successful lubricants business, lifting of cargos from Oman LNG and bunkering operation in the south of the country.

Today, the jewel in this relationship's crown is Block 61, home to the giant Khazzan and Ghazeer fields, located around 350 kilometres southwest of Muscat, deep in the Omani desert, where summer temperatures regularly hit 50°C.

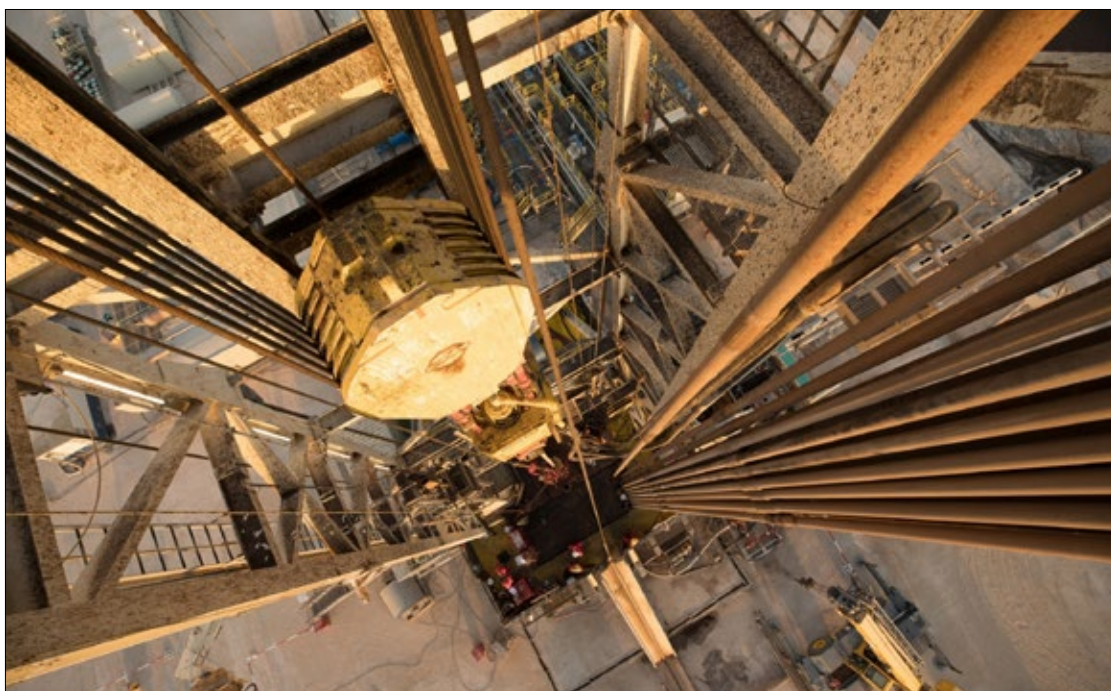
With an estimated 10.5 trillion cubic feet of recoverable reserves, Khazzan and Ghazeer are some of the largest tight gas fields in the Middle East. They're also some of the most complex, thanks to the five kilometres of millennia-baked rock that sits

above the reservoirs. Indeed, when Khazzan was first discovered in the 1990s, the economics were simply too prohibitive to develop this 'tight' gas.

Breakthroughs in seismic and drilling techniques changed all of that and, by 2007, bp had become a leader in developing tight gas projects, thanks to its work in the US. So, it was an honour for the company to be awarded the Khazzan contract and share the lessons it had learned to help Oman assess and later develop the field.

bp quickly set to work, conducting what would become the largest onshore seismic survey of its kind, gathering vital reservoir data from a 2,800 square kilometre area in just five months. The study was followed by a three-year extended well test, in which gas and condensate were recovered rather than flared, which proved that Khazzan was indeed a viable reservoir and, by 2013, bp and Oman had signed an agreement to proceed to full-field development, on the promise of first gas by the end of 2017.

To meet this challenging deadline, some 13,500 people (at the peak of construction) helped drill dozens of new wells, lay hundreds of kilometres of pipeline and build some of the most efficient gas processing facilities



Breaking records
in well drilling

anywhere in the world. *“It takes teamwork to build the kind of world-class facilities that you see at Khazzan today,”* says bp Oman president Yousuf Al Ojaili. *“It’s been a pleasure to work alongside our partners at the Ministry of Oil and Gas, OQ and to achieve this.”*

But this partnership didn’t just build a gas plant out in the desert, it helped an entire town blossom, with new roads, a water treatment plant, waste facilities, accommodation blocks, kitchens and a clinic that, in 2019, won the Ministry of Health’s Excellence Award for the Best Private First Aid Clinic.

The site is now the same size as the whole of Greater London, which brings its challenges – not least in terms of safety. Khazzan is a six-hour drive from Muscat and it takes about 90 minutes to drive from one side to the other. bp manages some of this risk by bussing in shift workers to reduce the number of vehicles on the road. However, the kilometres still mount up and, in 2019, the team drove some 14.4 million of them without an incident.

“People’s safety, health and wellbeing have always been our first priority,” says Al Ojaili. *“We have thousands of people on site, often working in incredibly hot conditions, so it’s important we have the right breaks in place and that everyone has access to essentials, like water.”*

In 2018, bp Oman also piloted the use of wearable technology at one of its drilling rigs. The special vests are tailored to the wearer and send data on heart and respiratory rate and skin temperature to their smartphone. If the data exceeds the individual’s healthy parameters, a text message and email alert is sent to the rig medic and health and safety leader so that they can intervene.¹

Technology isn’t just benefitting people, it’s also

helping to lower Khazzan’s greenhouse gas emissions. Khazzan is pursuing methane reductions by using gas cloud imaging cameras that continuously monitor and identify new leaks – known in the industry as fugitive emissions. The cameras send an alert to the control room whenever emissions are detected, meaning bp can respond and fix the problem more quickly. Reducing emissions and methane are part of bp’s 10 aims to become a net zero company by 2050 and to help the world get to net zero, as it reimagines energy for people and the planet.

And as you’d expect of a site located in the desert, bp closely monitors its water consumption. As well as drinking supplies, the company uses saline water in several operations, including hydraulic stimulation. That water is piped from bp-drilled wells 60 kilometres away and the salt removed in a reverse osmosis plant that bp built.

Nevertheless, water scarcity is a key issue for Oman and these supplies are subject to the country’s rigorous conservation regulations. So, in 2018, bp conducted a computer modelling study and incorporated the findings into its long-term water management plan to continue reducing its demand over time.

If the effort this partnership has gone to demonstrates anything, it is just how important Khazzan and Ghazeer are to Oman. The field’s first phase of production will eventually see around 200 wells and is currently producing 1 billion cubic feet of gas plus 30,000 barrels of condensate every day. The second phase, Ghazeer, was started up safely and ahead of schedule in October 2020. Total production capacity from Block 61, comprising

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Water treatment plant – helping to conserve water

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both Khazzan and Ghazeer, is expected to rise to 1.5 billion cubic feet of gas a day and more than 65,000 barrels a day of associated condensate. The block has the capacity to deliver approximately 35 per cent of Oman's total gas demand.

"The project exemplifies what a resilient and focused hydrocarbons business looks like," said Bernard Looney, chief executive, bp on 12 October 2020. "When we introduced our plans to reinvent bp, we were clear that to deliver them, we have to perform as we transform. There are few better examples of how we are doing just that than Ghazeer. This project has been delivered with capital discipline four months early, wells are being drilled in record times and, importantly, safety performance has been excellent."

Khazzan and Ghazeer have become a symbol of Oman's economic ambitions. Back in the 1970s, when the late Sultan Qaboos came to power, Oman had just one hospital, three schools and about 30 kilometres of tarmac road. The late Sultan Qaboos invested his 50-year reign in transforming his country's economic and social infrastructure, with gross domestic product rising from around US\$250 million to US\$79.2 billion in 2018.² Much of that was powered by a commitment to the Oman Vision 2020, set out by the late Sultan Qaboos in 1995 with the intention of using energy supplies to boost investment in areas such as health, education and enterprise to raise living standards.

That commitment has since evolved into the Oman Vision 2040, spearheaded by Oman's new leader, His Majesty Sultan Haitham bin Tarik, with the aim now of turning the country into one of the most 'developed nations' in the world.

"We know how important energy, especially gas, is to a country's economic and social development," says Al Ojaili. "bp is proud to be able to play a part in delivering new

resources that can help continue this important work."

bp supports this Vision in several ways, including a firm commitment to work with – and help develop – local supply chains. For example, in 2019, the company spent around US\$1 billion with Omani registered companies, while Ghazeer awarded six construction programmes worth US\$300 million to Omani companies.

Meanwhile, bp was the first company to pilot a Ministry of Oil and Gas-mandated digital tendering tool with its subcontractors, helping local companies embrace the digital revolution to improve their sourcing processes and build competitive edge. And bp supported a local company to provide domestic tight gas well stimulation services and help it compete with other multinational businesses operating in the Middle East.

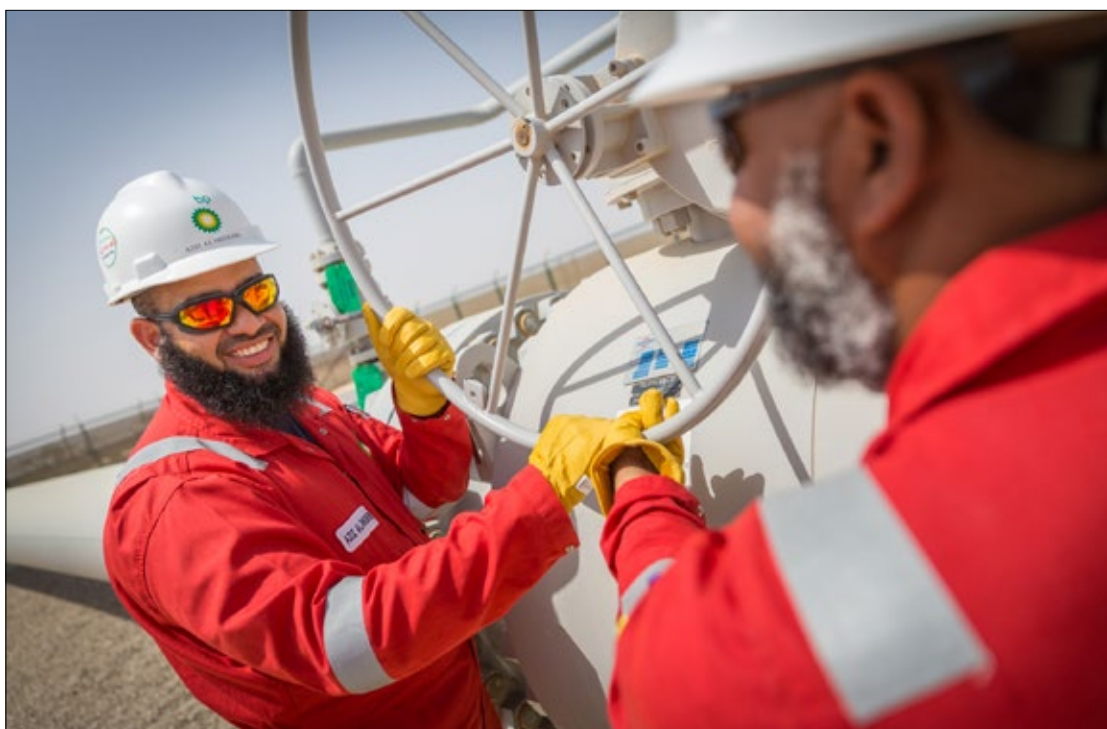
Employment is another way in which bp supports the Vision and, over the past decade, it has invested in its local team, with Omani nationals now representing more than 85 per cent of its 700-strong core team and half its leadership team. The company intends to reach 90 per cent 'Omanisation' of its whole team by 2025.

Graduates have always been key to this success, with bp Oman recruiting the first four into its global 'Challenge Programme' for fresh graduates back in 2010. Today, there are 80 Omani Challengers. Meanwhile, in 2012, the company set up its Technicians Development Programme, with candidates coming in from technical colleges and universities across the Sultanate to complete a four-year programme, including 18 months working towards an NVQ (National Vocational Qualification). More than 100 technicians were trained, many of whom now work at Khazzan as mechanical, electrical and production engineers.

Some of these technicians and graduates have also



Central processing facility



In education, bp supports a range of different programmes designed to help young people develop skills in science, technology, engineering and maths (STEM), as well as other skills like leadership and communication



Top:
Safe and reliable operations to deliver up to 1.5 bcf/d

Bottom:
Targeting 90 per cent Omanisation by 2025

(Images taken before Covid-19)

The depth of the commitment to the Omani people can also be seen in bp's long-standing social investment programme

Helping sustain Oman's economy

had the opportunity to work with our partner OQ and Oman LNG, thanks to an agreement between the three companies. What's more, around 20 Omanis are currently working with other bp businesses around the world, with the intention that they will eventually bring the skills they learn to Oman.

"We're passionate about developing our people," says Al Ojaili. "So, it's really pleasing to see our graduates at Khazzan and to be able to share best practices with OQ. It's testament to the depth of our relationship with Oman that we can create opportunities like this."

The depth of that commitment to the Omani people can also be seen in bp's long-standing social investment programme. Since its launch in 2014, bp has invested US\$13.3 million in more than 70 initiatives that have reached more than 55,000 people.

The programmes it supports fall into one of three areas – enterprise development, education and energy sustainability – all of which are close to bp's heart and align with the Vision's goals.

One beneficiary is Abdullah Al Saidi, whose company, Nafath Renewable Energy, installs and maintains solar panels. He has seen his company's revenue grow dramatically in the past six years and credits the bp-supported 'Khazzan Project for SME Development' for much of that success.

"My background is in electrical engineering," he says, "so I had no financial training. I found out about bp's financial skills course for entrepreneurs via social media, and it has transformed my business."

Al Saidi and his company are a perfect example of the way in which bp's social investment programme is helping empowering local Omanis with skills that

can help them build a self-sufficient and progressive future for their country. *"When Abdullah came to us with the idea, we asked him why he wanted to work with bp," says Shamsa Al Rawahi, bp Oman's social investment manager. "He said: 'The way that we have learned from bp, not all organizations do that. We saw more involvement, a willingness to work together, bp asks for our feedback and you care about changing things based on our words.' That was very satisfying to hear."*

In education, bp supports a range of different programmes designed to help young people develop skills in science, technology, engineering and maths (STEM), as well as other skills like leadership and communication. Where possible, those programmes take a practical approach. For example, the Fab Tech bus is the country's first mobile education lab, which offers students and teachers hands-on experience of technologies such as 3D printing and virtual and augmented reality. *"We're supporting Fab Tech bus initiatives that spread knowledge of manufacturing and innovation to thousands of young people across Oman," says Al Rawahi.*

The energy sustainability programmes that bp supports also offer young people opportunities to develop skills in alternative energies, such as solar. In November 2019, for example, a new state-of-the-art solar training facility was inaugurated at the German University of Technology in Oman (GUtech). The outcome of a unique partnership between bp, Shams Global Solutions and GUtech, the facility will give students the chance to develop practical skills on different types of solar systems and installation processes that they can use to launch their careers.

These programmes demonstrate that the best relationships take teamwork and a willingness to evolve. For bp, that also means being ready for new opportunities to help Oman achieve its ambitious goals. For example, in 2018, the company's trading division signed a deal with Oman LNG to buy 1.1 million tonnes of liquefied natural gas (LNG) over the next seven years. And in 2019, bp and Eni signed an exploration and production sharing agreement with Oman to explore for gas across a 2,700 square kilometre 'block' that lies just 30 kilometres east of Khazzan.

"These new agreements are important for bp," says Al Ojaili, "because they represent the next stage in our long-standing commitment to the country and His Majesty's Oman Vision 2040. We've always been proud to help Oman secure the energy supplies that drive its Vision and we are excited to be working together on new projects that will continue to make those ambitions a reality." **F**

1. Taken from 2018 SR <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/sustainability/group-reports/bp-sustainability-report-2018.pdf>
2. World Bank <https://data.worldbank.org/country/oman?view=chart>

