A DNO MAGAZINE

PEOPLE&PROJECTS

LICENSE TO DRILL

DNO is the pioneer oil company that ventures where others hesitate

FLOW AT THE TAWKE FIELD

Superintendant Thaer Naom is ready to export oil from the Kurdistan region of Iraq

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We see opportunities where others see threats, and this was particularly the case when we entered Kurdistan in 2004. Helge Eide

PEOPLE & PROJECTS

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A DIFFERENT KIND OF OIL COMPANY

Ever since the revitalization in 1996, DNO has been a different kind of company, exploiting opportunities where other companies see threats.

There are some fundamental principles underpinning DNO's strategy and substantial creation of value over time.

"One such principle is our project-oriented network model. It has been decisive in enabling a small company like ours to undertake such large projects. In 1996 we were 5-6 employees, entirely dependent on a good network. Today we are 550, but the model is still viable", says Managing Director Helge Eide. DNO has always been a different kind of oil company. "I guess we have an unorthodox approach to our projects. In some instances we tend to act more as a contractor. This enables us to utilise our best practice experiences from oil companies and service providers, and it helps us complete our projects in a rapid and cost efficient manner. We have a flat company structure with open communication lines. At the same time, we require loyalty to formal decisions. This is a demanding, but efficient model which gives competitive advantages", says Eide, underlining that DNO has always had a strategy of avoiding competition as far as possible.

"We see opportunities where others see threats, and this was particularly the case when we entered Kurdistan in 2004. We have also seen opportunities in projects where others looked for an exit. A good example of this is the first period after 1996, when business to a large extent was based on the tail production on mature fields on the UK Continental Shelf. We then took over a large field which was about to be shut down, and contributed to extending the field's lifetime by several years. We also bought our first license in Yemen from a company that wanted out. Later, we entered the Norwegian Shelf as one of the first smaller oil companies. Today there are several such companies operating in the North Sea, but in many ways DNO prepared the ground for them", Eide points out.

The term low cost, fast track is important to DNO. "This is illustrated by our projects in Yemen and Kurdistan. In our opinion, gaining access to oil, as well as developing discoveries to production at the lowest possible cost, are among the most important value-creating factors in an oil company. This is defined as finding and development cost (F&D costs). DNO has a good track record here, and measured by this key parameter, we have been among the top three in the Middle East for several years.

An important growth factor for an oil company is discovering more than it produces each year. Also here, DNO has been best in class.

"DNO's ability to deliver on these key factors has been a trademark for the Company", says Helge Eide.

DNO's activities in Yemen and, not least, in Kurdistan are perhaps the best examples of the risk willingness and pioneer spirit prevailing in the Company. "In Kurdistan we entered an area where practically nobody had been before us, and we have built a full scale operation here very quickly. Three years from entry to first production is a very short time, and in 2009 we received the final permission to export oil from the field, enabling us to test the field's full capacity. We are very pleased to have confirmation that the facilities deliver according to our expectations.

DNO is now in what may be called the Company's third growth cycle. Our core activities are concentrated on exploration and production in low cost areas. "During the next growth cycle, the Company intends to continue building on the good experiences gained. Future growth must be safeguarded through a more diversified portfolio. Our work related to the exploration activities in Mozambique is starting to give us hope that we may have a new growth area here. We are also looking at new opportunities in the Middle East and Northern Africa. We may also look for new offshore opportunities", says Eide.

The future growth will come from a combination of organic growth through exploration activities, and mergers and acquisitions. "A condition for this is, however, financial strength, which we believe will come when we are able to fully utilise our production capacity", says Eide. He points out that DNO may triple its oil production in a short period of time, and most of the investments for achieving such production increases have been made. "Without a doubt, we have a good foundation for further growth – both in the short and long term." ■

Without a doubt, we have a good foundation for further growth – both in the short and long term.

WHERE ARE WE?

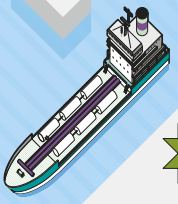
DNO serves as operator and active license partner in several production and exploration assets and as investor in other companies.

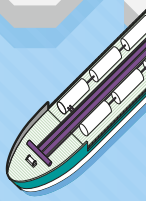
NORWAY

DNO's headquarter is in Oslo. The Corporate function, the Subsurface Teams and the Administration are situated in Oslo office. DNO has no operations in Norway, but participates on the Norweigian Continental Shelf (NCS) through its 11.66% shareholding in Det norske oljeselskap ASA.

UK

DNO has earlier operated the Heather/Broom and Thistle Fields on the UK Continental Shelf (UKCS). These assets were divested in 2004 as part of a change in the Company's strategy. DNO re-entered the UKCS in May 2005 taking a 50% working interest and operatorship in P1067 (Block 211/22b) located in the northern North Sea.



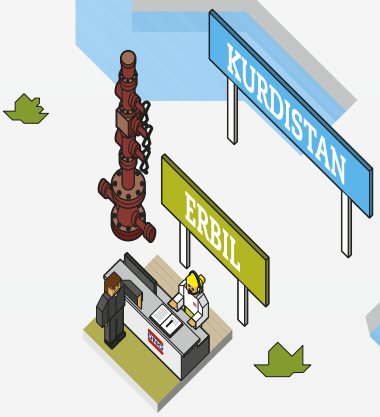


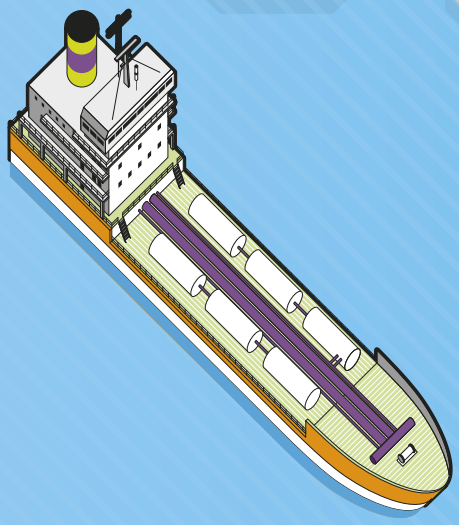
EQ. GUINEA

DNO entered Equatorial Guinea in 2003 through participation in exploration of an offshore block. GE Petrol is the operator on Block P, and DNO holds a 5% interest. A plan for development and operation (PDO) for Block P was submitted, by the former operator Devon, in August 2007. The PDO is currently being revised.

KURDISTAN REGION OF IRAQ

In June of 2004, DNO entered into production sharing contracts (PSC) with the Kurdistan Regional Government (KRG) in Northern Iraq. As one of the first international oil companies to enter this highly prospective region, DNO holds a key position in developing the local oil industry. DNO is operator for three licenses covered by the PSCs. DNO has completed one fast-track field development of the Tawke field. Export of crude oil from the Tawke field commenced 1 June 2009, marking another important milestone to DNO and KRG. DNO has an office located in Erbil, running the operations. The DNO Iraq management is located in Dubai.





YEMEN

DNO entered Yemen in 1998 and was approved as Operator later that year. The Company quickly expanded the operations through successful exploration and fast-track developments. DNO has further expanded its operations in Yemen and is currently holding interests in seven assets, all located in the prolific Sayun-Masila Basin. Oil has become an important part of Yemen's economic basis and DNO is working closely with the authorities to further develop the oil resources in the country. DNO has an office in Sana'a, running the operations.

MOZAMBIQUE

DNO was awarded an Exploration and Production Contract (EPC) in 2003 for a total of eight years. After drilling two dry wells, the focus has been switched to the unexplored Urema Graben towards north in the license. DNO has acquired a total of almost 800 km 2D seismic the last few years and is preparing for exploration drilling in 2010. The Inhaminga Block is stretching from the port city of Beira and North towards the Zambesi River.

A WINNING STRATEGY

FAST TRACK – LOW COST

DNO is good at converting resources to reserves at low cost and bringing reserves into production fast. This is a major competitive advantage.

We have few meetings, no red tape and a top management working as a team, not as an authoritarian structure. Tore Lilloe Olsen

For DNO it is a rule to give preference to local resources. By hiring locals, we keep a good relationship with the authorities and the local communities. Rod Vallee, Drilling Superintendent

Rod Vallee, Drilling Superintendent

Corporate Head of Exploration Tore Lilloe-Olsen.

Oil companies world wide are struggling with keeping up their reserves and production, due to increased scarcity of easy oil and gas. By moving early into emerging, and often more risky areas, DNO is rightfully called pioneers, and thus managed to keep their RRR (Reserve Replacement Ratio) high.

"We focus on early entry into prosperous areas and aim for first-mover advantages", says Corporate Head of Exploration Tore Lilloe-Olsen.

Open lines

It's not uncommon to bump into the CEO, or other key management in the hallways of DNO's offices, whether you visit them in Oslo or Dubai. Doors are always open, so are their communication lines. People pop their heads in and out of offices, always ready to hear news, help out or discuss an idea. "We have few meetings, no red tape and a top management working as a team, not as an authoritarian structure", says Lilloe-Olsen.

Carrier rig

To lease a rig for drilling of wells maybe the greatest cost on an oil company's budget. For offshore drilling, the day rate for a rig easily reaches USD 500,000. Onshore drilling rigs are less expensive and DNO owns a small carrier rig named Sindi#1 after the Sindi tribe in Northern Iraq. This is a special design rig for fast movements between the various well sites. It's so small that the mast is mounted on the carrier itself. The Sindi rig completed the Erbil#2 well tests in March. The test results confirm substantial in-place volumes, but the productivity and recovery from Cretaceous is still questionable. Jens-Petter Nørgård, Head of Petroleum Technology, was monitoring the well test on site Erbil#2 and is now analyzing and integrating the test results in the reservoir modeling work.

Multi tasks

Subsurface experts, geophysicists, geologists, petrophysicists and reservoir engineers are put together in experts teams, specialized in discovering and developing hydrocarbons, like Nørgård, who is daily working in the sub-surface team based in Oslo. With the management of DNO Iraq AS based in Dubai, the production organization on site in Kurdistan, and the subsurface team in Oslo, strong cooperation and communication is necessary to deliver good results. Their success show how flexible DNO is.

"Since we often operate in remote areas, all services are not always available, and we have to cope with what we have. Each one of us may not have all the knowledge, but together as a team, we are able to do all the multiple tasks", says Canadian Rod Vallee, Drilling Superintendent on the Sindi #1 rig, and responsible for both personnel, equipment, service and the rig, which he followed from construction in Shanghai, mobilized via Dubai to Kurdistan. He is also keen on emphasizing the importance of hiring local work force.

"For DNO it is a rule to give preference to local resources. By hiring locals, we keep a good relationship with the authorities and the local communities". ■

DNO'S RECIPE FOR SUCCESS

EXPERTISE IN GEOLOGICAL UNDERSTANDING
DNO's extensive experience in exploration, operations and production of oil is unique. Their core team of skilled subsurface specialists has succeeded in finding oil, describing the geological conditions in detail and managing the reservoirs through production.

SHORT DECISION LINES
Management operates through cooperation with short decision lines and a minimum of self imposed hurdles. Project teams handle multi tasks with ease. The same team takes responsibility for moving the project from exploration to production, making transition between the different project phases seamless with no handover or loss of momentum. The core team is made up of in-house resources so that knowledge is retained and built upon for projects to come.

DIVERSIFIED PORTFOLIO
Currently DNO is operating in three markets with different but complementary properties:
Yemen – Keeping up production of 20,000 barrels per day in mature fields.
Kurdistan Region of Iraq – Developing a potentially high production from current level of 6,000 barrels per day.
Mozambique – A frontier area with high risk but high potential, currently at the exploration stage.
DNO will continue to focus on their target areas in East Africa, North Africa and the Middle East, to build up an even more robust and diversified market portfolio.

BUSINESS KNOW-HOW
DNO is one of Norway's oldest oil companies, with vast experience from both offshore and land based exploration. The Company has been through complete make-over, from strategies to management and ownership. Today, their staff is highly competent and international in every aspect.

EXCLUSIVE DEALS
In Mozambique, DNO has exclusive rights to a huge area with potential gas (and oil) reserves. The area is part of the great East African rift, which is the largest continental rift system on Earth.

A LAND OF OPPORTUNITIES

Mozambique is not yet one of the world's oil nations – but that could soon change. DNO is one of the few oil companys to have been awarded an exploration license in this vast country in south-east Africa.

1. Jarl Aagedal, Country Manager for DNO Mozambique.
2. Inspection of seismic line in the Urema Graben.
3. Dry soil gas sampling performed by Erik Syrdalen, Business Unit Manager.
4. De-mining in the Inhaminga area.
5. Acquisition of the 2009 seismic survey.
6. De-mining vehicle.

So far, only gas has been discovered in Mozambique, but – as everyone knows – where there is gas, there may also be oil.

"The sediment basin in Mozambique is part of the continental rift and measures approximately 400,000 square kilometres," explains Jarl Aagedal, Country Manager for DNO and a petroleum engineer who has worked in the petroleum industry since 1969. He also possesses local knowledge, a key factor for successfully establishing good cooperation between the Company and the authorities, contractors and the local communities affected by the activities.

Virgin territory

The potential oil adventure in Mozambique is only just beginning, but DNO is one of the first to have started exploration work, an activity which Mr Aagedal refers to as "wildcatting".

"This is virgin territory, where very few oil companies have been engaged, and we are in a very early phase in terms of a potential oil extraction," he points out. Nevertheless, he believes in the possibility of making commercially viable oil discoveries: "We have conducted seismic surveys and drilled exploratory wells and have found indications of gas. In the first well the reservoir seal was broken, presumably as a result of earthquake activity in the African Rift. In our area, 10 kilometers too far east or west can be wrong. But the theory clearly indicates that there may be oil in the area," says Mr Aagedal.

Road building and mine clearing

The area to be explored is vast. The Inhaminga Block, which is the area for which DNO has an exploration license, covers approximately 11,000 square kilometers. By comparison, a North Sea block measures 450 square kilometres. Much of the area is pure wilderness covered by dense forest.

"In the southern area covered by our license,

The theory clearly indicates that there may be oil in the area. Jarl Aagedal

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the main road runs from the port city of Beira to Zimbabwe, Malawi and Zambia. The national highway runs across the northern part. This means that we can drive on reasonably good and asphalted roads between the southern to the north-eastern areas covered by our license. But we have to build the roads out to the well sites ourselves," Mr Aagedal explains. DNO has therefore constructed 36 kilometers of road to one well site and has improved 80 kilometers of road to another one, including river crossings. In addition, the crews must undertake mine clearing before the roads can be laid, and the rainy season and flood gullies create extra problems.

Good corporate citizen

"We cooperate with the local authorities in the region, where the majority of inhabitants are subsistence farmers. They really appreciate our arrival, partly because we use local unskilled labour and pay well," says Mr Aagedal, who also points out that exploration activities in Mozambique require exceptionally thorough planning. There are stringent requirements for corporate communication and information to the local authorities and inhabitants. The activities must also leave the smallest possible environmental footprint. "That is company policy and a moral requirement of ethical conduct. We should act as a good corporate citizen in small communities and, for example, provide equipment to schools and health clinics. This requires having a good dialog with local authorities or tribal chiefs," says Mr Aagedal.

When DNO undertakes test drilling, it transports between 50 and 60 containers holding equipment in addition to the drilling rigs. "We also have to arrange for providing supplies for our operations. That is why we try to stay six to nine months ahead of our plans. There is a massive injection of capital involved in the exploration phase, but if we make commercially productive findings, vast areas will suddenly become prospective. DNO will then open the way to a whole new oil adventure." ■

NORWEGIAN LEGISLATION PROTECTS MOZAMBIQUE

Mozambique protects its natural resources, thanks to assistance from Norway, not least.

In 1992 Mozambique made the transition to a market economy, and two years later it entered into a cooperation agreement with Norway for developing the country's system of petroleum administration. Mozambique's administration system is therefore very similar to that of Norway.

"Norwegian petroleum legislation is exceptionally democratic and has a good reputation internationally. Guidance on petroleum administration has therefore been a significant part of Norwegian aid for many years," says Mr Aagedal, who in 1996 was the local representative for the Norwegian Petroleum Directorate 's development cooperation with the then newly established Petroleum Office in Mozambique. "We came in to provide guidance and training. We were also supposed to assist with commercializing a large gas field which was originally discovered in 1963 but which was not commercially productive at the time."

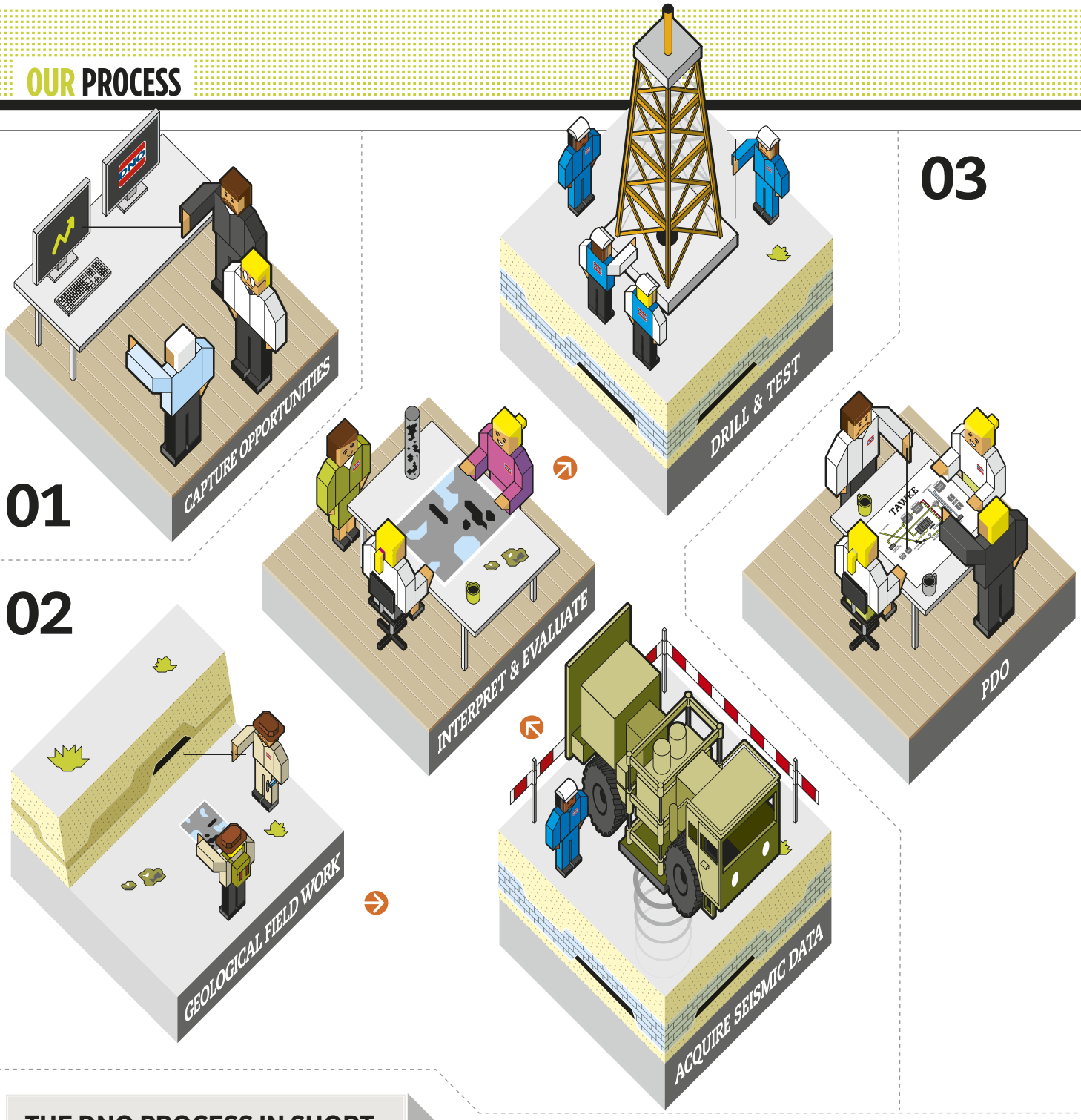
Jarl Aagedal was the Norwegian Petroleum Directorate's local representative up until 2002, after which that function was discontinued. By then Mozambique had developed the Pande Field and had built a gas pipeline to South Africa.

While the gas in the south was concentrated on for a period, international industry began to show an interest in other parts of the country. DNO is now one of eight companies to have been granted exploration licenses. DNO's license expires in 2011.

The companies are granted licenses for given areas for a maximum period of eight years, during which time they are obligated to undertake programs that involve seismic surveys and test drilling. The companies have the right to retain the areas that cover any commercial findings for 30 years.

"If oil is found, this could prove to be a fantastic adventure for Mozambique," says Mr Aagedal, who believes that the country will avoid the resource curse: "The democratic principles are in place and the country has a good administrative system and the ability and will to enforce its laws".

OUR PROCESS



THE DNO PROCESS IN SHORT

01 Business Development

For DNO, business development is to monitor the transaction market for good opportunities that fit with the Company strategy. It is about meeting with other companies and utilize the business network, that often imply data room visits to evaluate quality and potential of assets. It is always a competition with other interested parties. We need to be cleverer than the others, but sometimes it is a bit of luck too.

Tore Lilloe-Olsen,
Corporate Head of Exploration, Oslo

02 Exploration

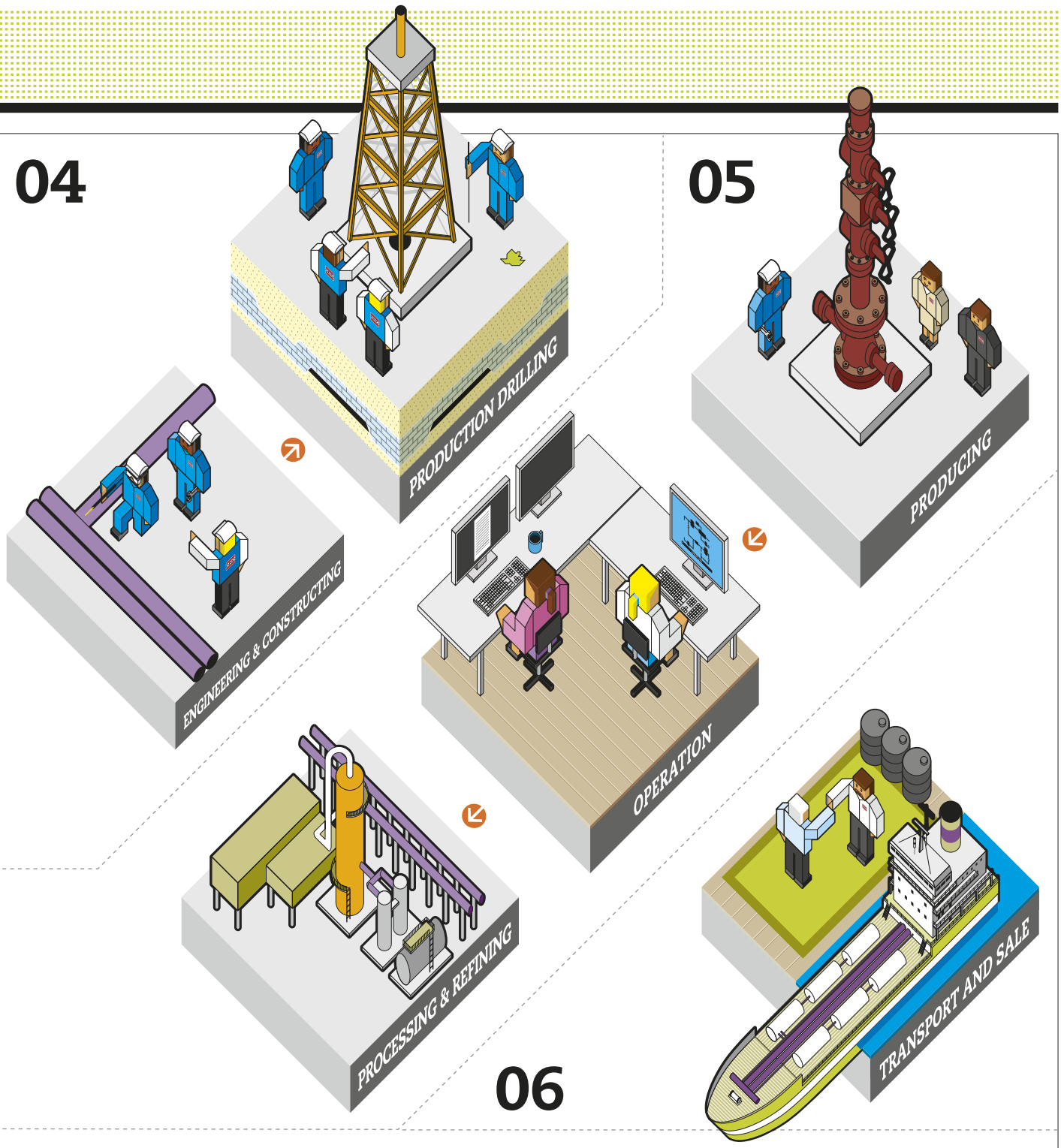
The DNO staff has a long and broad experience in exploration for oil and gas. DNO has during the 10 last years focused on onshore basins, which often allows for geological fieldwork as a part of the integrated geological analysis, in combination with seismic and well data. Seismic data acquisition onshore is often time consuming, while onshore exploration drilling is often less time and cost consuming, compared to offshore operations.

Nils Bang, Exploration Manager,
Kurdistan Business Unit, Oslo

03 Field development

When a discovery has been made and a positive well test has been performed, the field development studies can start. All subsurface information is integrated into a reservoir model that forms the design basis for reserve calculations, economic analysis and functional requirements for wells and topside facilities. The final product of this phase is the Plan for Development and Operation (PDO), which forms the basis for a development decision

Ole Nygaard, Chief Petroleum Engineer, Oslo



04 Project Execution

When the PDO has been sanctioned by the partnership, and approved by the authorities, the procurement and engineering work can start. A project organization will execute the project by extensive use of vendors and subcontractors. Along with engineering and construction of the topside facilities, the initial production drilling will be executed, in order to secure early production start up and early revenues.

Jon Petter Sargeant, Operations Director, Kurdistan Business Unit, Dubai

05 Production

DNO's production comes from 5 fields in Yemen and 1 field in Kurdistan. In Yemen, Tasour, Godah and Nabrajah are all DNO operated, Sharyouf and Bayoot are operated by Dove. The Tawke Field in Kurdistan is DNO operated and represents the major share of the Company's oil reserves. The field is able to deliver in line with the design capacity of 50,000 bopd. In 2009, the average gross production was 21,511 bopd, and the DNO working interest production was 12,285 bopd.

Eric Aillaud, Production Manager, Kurdistan Business Unit, Dubai

06 Transport & Sale

From DNO's production facilities the crude oil is exported in pipelines to the international market, or sold to the local market. In Yemen, crude oil is exported to the delivery point (transfer of rights) located in Block 14 operated by Nexen. Nexen transports the crude oil from the delivery point to the shipment point at the coast. Settlement for crude oil is based on international market price and is received on a monthly basis.

Gaute Belstad, Advisor Finance, Oslo

ENERGY FRIEND IN KURDISTAN

They have the license, the ownership, the people, the pipeline and the oil. Besides, DNO got a head start as a pioneer in what may become one of the biggest oil exporting regions in the world.

Managing Director of DNO Iraq AS, Magne Normann played a major part of their early success in making the right connections.

Going into the Kurdistan Region when everyone else was reluctant to do so was not easy. Magne Normann, Managing Director of DNO Iraq AS.

We knew from the very outset that good security was key for attracting service providers to come to Kurdistan. Magne Normann

DNO is the pioneer oil company who signed two contracts with the Kurdistan Regional Government, three days before the interim government was instituted in Iraq. Managing director of DNO Iraq AS, Magne Normann, recalls the time DNO entered the region and signed the PSAs (Production Sharing Agreements) with the Regional Government of Kurdistan on 25th June 2004. Timing was a key issue because at the time it was improbable that agreement could be signed after such an interim government was formed. "We managed it at the last minute," he says. But getting there and knowing exactly what to do was the result of highly skilled networking and diplomacy that took some time. Mr Normann had made the right connections, thanks to his long and worldwide experience in the oil business.

Fast development

Charley Dunn, DNO's Drilling Manager, has known Mr Normann for years, and pinpoints what makes DNO succeed where others fail: " They hire people who are truly dedicated. There is no limit to what people here can do. They set high standards and low fences. When you're in, you understand people are their biggest asset."

Having completed the initial regional geological assessments, seismic acquisition commenced on the ground on 17 May 2005 and was completed in September. The location of the first well was determined, and in October 2005 DNO had their first drilling rig mobilized from China. The test would be the Tawke anticline. "Needless to say, it was very important to DNO to strike oil in the first well; and so we did," says Mr Normann. That early success led to a fast-track field development of Tawke, with more wells being drilled and a suitable process plant for crude oil being built to remove water and gas. In parallel to constructing a Central Processing Facility they built an export pipeline from the Tawke field to a tie-in point connecting with the existing Iraq/Turkey pipelines, close to the border with Turkey at Peshkabor.

Driven by idealism

Peshkabor is an Assyrian (Christian) village, which was totally demolished by Saddam Hussein in 1988. Among the men who lost their homes and many members of their families is George Yacu, who became the first, and most important, contact for DNO in the Kurdistan Regional Government (KRG). "George is our most trusted man, and has a vision and future perspective for energy development in Kurdistan that is very much aligned with that of DNO," says Mr Normann, with great respect for the 78-year-old KRG professional.

George Yacu and his family emigrated to the US, but George spends a considerable amount of his time in Kurdistan to help rebuild his beloved home country. He does it out of pure idealism, providing his vast knowledge of the Iraqi oil industry, and is the Senior Advisor to the Prime Minister on oil and gas issues, among many other duties. "Very few people actually believed there was oil in our region," recalls Mr Yacu, as we meet him over dinner: "Lots of wrong ideas were flying around. But we had the competence to know otherwise," he says.

During Saddam Hussein's regime, George Yacu was responsible for oil exploration in the whole of Iraq. George Yacu had a comprehensive organization at that time, and one of his subordinates was Tarik A Abdullah Chalabi. Mr Chalabi was recruited by DNO towards the end of 2004 to manage DNO locally. When Mr Yacu and Mr Chalabi worked in Baghdad, the Kurdish people were not allowed to develop any oil business activities on their own territory, the Kurdistan Region. This changed back in 2004 when DNO, as the only international upstream

KURDISTAN REGION OF IRAQ:

Kurdistan Region is an autonomous, federally recognized region of Iraq. Its capital is the city of Erbil. The region is officially governed by the Kurdistan Regional Government (KRG).

- Population by 2010 is estimated to be 8 million.
- As a major economic power in Iraq, Kurdistan region has the lowest poverty rates and highest standard of living in Iraq. It is the most stable and secure region of Iraq.
- Until 1979, Iraq reached peak production of 3, 7 million barrels per day, only passed by Iran and Saudi Arabia. Today, their oil production is heavily crippled by years of political turmoil, and less than half of their known oil fields are used.
- DNO signed their first PSA (Production Sharing Agreement) with the Kurdistan Regional Government in June 2004. They were the first oil company to sign an agreement.
- Today, DNO has 14 wells in the Tawke area, where they currently have reached an export capacity of 50 000 barrels per day.

KRG member and oil business veteran George Yacu has been associated with DNO since they signed their first Productions Sharing Agreements.

George is our most trusted man, and has a vision and future perspective for energy development in Kurdistan that is very much aligned with that of DNO. Magne Normann

oil company, had the courage to explore for oil and gas in Kurdistan. Others were invited but declined for various reasons, mostly associated with political and security risks.

George Yacu had by then spent a few years with the sheikhs in Abu Dhabi, today one of the world's richest oil regions. He has experienced how countries and regions develop from the pioneering stage of a growing oil business and of how it this completely changes people's lives. "In those days people collected stamps and traded in passports and pearls," he says with a smile. People were generally quite poor, but they had a lot of pride. So, they would come to our oil camps to ask for jobs, but their qualifications would be for jobs as drivers or guards in those days. Nothing less," he adds smiling.

The older generations of Abu Dhabi and Kurdistan have a common history of a troubled past, the kind of experience that shapes great men. Yacu is more worried about today's money-driven generation inheriting wealth and forgetting the past. Mr Yacu is interested in collecting rare books, stories and history, and will make sure that he also remembers the past. He is a walking library, and has written a few historic texts himself, though only in Arabic. He is concerned about the KRG's role in preserving the Kurdish heritage and has also been a major contributor in the rebuilding of his childhood village, Peshkabor.

Security is key

"We knew from the very outset that good security was key for attracting service providers to come to Kurdistan, "says Magne Normann. "Ardan was hired as our security consultant, and together we drafted security plans for all of DNO's activities in Kurdistan," he explains. DNO had the full support of the Prime Minister, HE Nechirvan Barzani, to make use of the excellent KRG security organization. The work started on the land close to the city of Dohuk, and Mr Said Shengali was given the task of making sure that DNO was well looked after from a security perspective. "The cooperation with the KRG security service in Dohuk has been outstanding, with zero security-related incidents from 2004 up to today," says Mr Normann.

The initial stage of attracting seismic service companies to mobilize equipment and personnel to Kurdistan proved to be difficult. DNO managed the task very well. A Canadian company, Terra-Seis International, had the courage to get the work done, and DNO was in business.

Once the world observed DNO's performance in Kurdistan on all fronts, it became easier to mobilize other support service companies. The Great Wall Drilling Company of China was the next company to bring its first drilling rig into the region. Today, more than 30 foreign oil companies are established in the Kurdistan Region, which, if all goes well, will be one of the greatest places to be for the oil business in the near future. ■

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1. General Manager for DNO in Kurdistan region Tarik Chalabi has links to markets that might be vital for future explorations.

2. The Kurdistan Region has a long tradition of bringing together people from different political, religious and cultural backgrounds.

WELL CONNECTED AND PROTECTED

"If DNO succeeds, so will we," says the KRG (Kurdistan Regional Government) which chose DNO as its pioneer partner back in 2004.

Since gaining peace, the northern part of Iraq bordering on Turkey and Syria has developed at a rapid rate. Today it is a dynamic hub of new ventures, many of them funded by foreign companies who believe the regional capitol Erbil may become the Dubai of the Kurdistan Region. However, without the cooperation of local driving forces, being at the right place at the right time and with the right business, is not always easy.

First and foremost

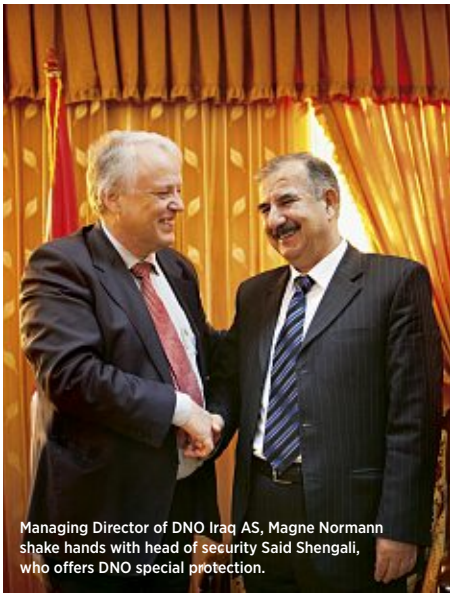
When DNO staff fly into Erbil, from Dubai or Oslo, they use Zagros Air or the other international airlines serving different locations in the Middle East and Europe. The Zagros name pops up as part of the electricity system and construction of health institutions, to name but a few areas in which this fast-growing group is expanding. Today the KRG is Zagros' biggest customer, as the Zagros Group is building a great deal of the infrastructure in the region.

"The mentality is very different now. We are trying to link Kurdistan to the rest of the world. Our group is not only rebuilding our future here, but encouraging foreign investors to take part in it," says the Company's CEO, Delsoz Sherwani, behind a desk in his main office which, by European standards is quite modest. But modesty is not the word when it comes to the Company's ambitions for future development. "This region is now offering the safest and most promising environment in Iraq. We are very optimistic because we are going in the right direction. We participate in investor forums and exhibitions all over Europe to attract new business. The future is very bright indeed," he says, with a broad smile.

Links to Turkey

The Zagros Group first shook hands with the DNO management in 2006, when it was decided to develop the Tawke oil field. He tells the story of how the partnership evolved: "When DNO first decided to develop the oil field, we were invited to tender for this construction work." says Mr Sherwani and continued "We at Zagros considered this opportunity to be very important to us as nobody else has progressed

If DNO succeeds, then we will succeed. That is why we do everything to protect and help them. Said Shengali



Managing Director of DNO Iraq AS, Magne Normann shake hands with head of security Said Shengali, who offers DNO special protection.

CEO of Zagros Group Delsoz Sherwani is part of the advisory board helping DNO to do good business and networking in the Kurdistan Region.

like DNO did. We teamed up with the Turkish company PEICC, and we jointly presented our tender to DNO which resulted in contract award."

"For us, the joint establishment of Zagros and PEICC was a good choice at the time. It enabled us to carry out the Tawke field development by a joint venture consisting of a local contractor with a link to Turkey, which from a technical and political perspective was important. Having solid links with Turkey is important to us," says Magne Normann, Managing Director of DNO Iraq AS.

Ready for Export!

Peshkabor is a small village close to the border with Turkey. DNO's pipeline from the Tawke oil field is connected to the Iraq/Turkey pipeline infrastructure and the global oil market at Peshkhabor.

"We connected the Tawke export line to the existing pipelines in early 2009. We commenced exporting on 1 June 2009 and stopped on 22 September in the same year, as instructed by the KRG. We reached the maximum export flow rate of 50,000 barrels per day in a very short period of time. The quality of the oil is tested and accepted by the SOMO organization, which is responsible for marketing and exporting of crude oil from Iraq. Our oil is comingled with crude oil flowing from other fields in Iraq, and the comingled crude oil is then sold on the global market," says Thaer Naom, Superintendant at the Tawke oil field.

DNO has its own dedicated area at Peshkabor, with modern facilities to house a substantial number of guards and operators. The guards and operators are all locally employed. "The security guards are doing a fine job on ensuring that all crews working for DNO feel secure and can carry out their work undisturbed," Mr Naom adds.

Everyone at DNO is very pleased with the security arrangements in DNO's area of operations.

Good security

Security is alpha and omega for DNO's success and for that of the entire Kurdistan Region, which in this respect cannot be compared to the rest of Iraq. As one enters the city of Dohuk, not far from the Tawke oil field, an impressive concrete building in happy pink welcomes the visitors and reassures the inhabitants that security is in good hands. Said Shengali, who is head of security is a former teacher who, after 21 years of imparting his knowledge of Kurdish history and language to the next generation, changed his fate with his homeland's fate. Today he is a man who is loved and respected for the fact that the children no longer have to fear walking down the street or going to bed feeling insecure about what the next day will bring. When asked how many security personnel he has under his command, he makes a gesture as if embracing the world and smiles: "Ask how many people are employed altogether in Dohuk. That is how many security guards we have.

"DNO is, however, very special to Mr Shengali. DNO is *the* foreign company to be given special protection by his army of security. DNO's security unit, a small "army" by some standards, consists of about 260 of DNO's 470 employees in the field. Since DNO is the first, and we call them the pioneers from Norway, to carve out our future as a major oil producer, they are VIPs to us. If DNO succeeds, then we will succeed. That is why we do everything to protect and help them," Mr. Shengali explains. ■

LOCAL OPPORTUNITIES

At Tawke, the oil-rich hillside the geologists call an anticline, 14 oil wells stand among sheep and tiny villages. Over 120 men work shifts on the site. The future is bright, upon a troubled past.

The temperature is close to zero when we arrive, but in the summertime it can be as high as 50 °C. The landscape is barren, but green, and is situated among snow-capped mountains. Only farmers with ancient knowledge of pastures and agriculture can handle these conditions. But DNO offers more than shepherding and farming skills to the new generation of local inhabitants; it offers a sustainable future.

"Since the beginning we have provided water, infrastructure and training. We have students from the nearby town of Zakho here, to show them how theory is put into practice. We also visit local schools, where we tell them this: "DNO is putting money in the bank, and *you* are the money," says superintendant Thaer Naom, who has a BSc in Chemical Engineering from Baghdad and 23 years of work experience at the BAIJI Refinery.

Security is a normal part of life in the Middle East, besides offering good job opportunities for the local inhabitants.

It's great working for DNO. It's good for our development, for employment and for learning about European culture. Mohammed Hussein Khalil

1. Superintendant at the Tawke oil field, Thaer Naom works closely with the local community.

2. George Sale from Ardan monitors the security at the oil camp. 'Security issues are about a lot more than check points', he says.

3. Johan Bergenrup is supervising personnel movements to and from the field.

4. KRG Security Officer Mohammed Hussein Khalil is coordinating all security forces provided by the KRG.

A caring company

And they are indeed earning good money; the average salary at the oil field camp is well above the regional average. DNO is committed to train people on site to operate the facilities safely at the highest standards. Local personnel are often joining DNO at entry levels and enjoy training schemes that will offer personnel more responsibilities and attractive jobs in the future.

One local employee of KRG Security is Officer Mohammed Hussein Khalil. "It's great working for DNO. It's good for our development, for employment and for learning about European culture. They are nice people with good experience, and they communicate well. Believe me, I've visited almost every foreign company in this region, and DNO is by far the best," he says.

His own communications skills are quite good, too. As we drive around the area, he makes his daily phone calls to his mother and the surrounding village chiefs. "We just need to know how they're doing. If someone needs something, we help them out. We want everyone around us to be happy." He suddenly becomes thoughtful and adds: "My family's village was destroyed by Saddam. But he did not only destroy the buildings; he made us fearful. It takes time to change minds. Everyone lost someone," he says, quietly.

A different mindset

The security procedures at the Tawke field are prepared by Ardan, a security company that has been working with DNO from the very beginning. This work, however, has been prepared jointly with the KRG Security Commander of Dihok Governorate. George Sale of Ardan and KRG Security Officer Mohammed Hussein Khalil are jointly implementing procedures to ensure all personnel are looked after. Movements of personnel to and from the Tawke field are supervised by Johan Bergenrup from Ardan. Both Mr Sale and Mr Bergenrup have wide military experience from organizations like the UN in the Congo and Indonesia. Their background has prepared them well for understanding how to communicate and organize a team of people from different religious, political and cultural backgrounds, many of them scarred by war.

"Security is a lot more than having checkpoints with armed guards," Mr Bergenrup explains, "Life here in Kurdistan is half farming and half military. Every man over 16 years old can, and will, handle a weapon. We understand them, as we not only have similar experience, but we have also studied their political and historical situation and background.

Mr Sale and Mr Bergenrup consider the present political situation in Kurdistan to be stable and safe for DNO's activities: "We are adopting and promoting DNO's policies throughout the organization, everything from road safety to maintenance and garbage handling. It's going quite well compared to anywhere else we have worked. The Kurdish people are easy going and keen learners," they conclude. ■

PEOPLE IN DNO

DLOVAN ADMAN KARIM,
Assistant Cook
"DNO takes very good care of us. It's a great place to work."

SCALA AZIZ ALQASALIAS,
Mechanical Engineer, Project Secretary, Tawke Field
"DNO offers opportunities for women. Tolerance and respect is a rule."

SAEED KREET,
Camp Boss, Tawke
"We have a great group of people here, working together as friends, no matter where they come from. My salary and work are also a lot better here than what I was offered when I lived in Germany."

SHARING THE RISKS AND THE OPPORTUNITIES

When DNO looked for a drilling contractor, Great Wall Drilling Company took on the challenge. “There are no rewards without risk,” they say, and believe DNO will make fortunes one day.

No service company would go in at first, but now that we have showed the way, they all come! Charley Dunn

1. Charley Dunn makes sure all operations below ground run smoothly.

2. The DNO management encourages the exchange of ideas, says representatives from Great Wall Drilling Company

In spite of promising geological data, DNO did not at first find it easy to attract well service providers willing to work in Kurdistan. This has changed today, but the larger American based service providers like Schlumberger and Halliburton are still not there. "Both international and local well service companies have set up business in Kurdistan and there is now competition which is good for the petroleum sector; OilServ being the bravest and largest local well service company, has expanded considerably over the past two years," says Magne Normann.

From his international experience in the oil industry in many different countries, Magne Normann knows that linking up with the right contractors is the key to success. Before joining DNO, he worked for Smedvig Drilling, a Norwegian drilling contractor, and before that Mobil and Saga Petroleum. He holds a double MSc; in Mechanical Engineering and Petroleum Engineering.

The challenge

"Finding the right service is a challenge in our business. With the total lack of services within the petroleum sector in Kurdistan, our strategy was to identify and attract a drilling contractor that can provide both the drilling and well services," says Mr Normann. CNPC (China National Petroleum Company) is one of the largest energy companies of China and the parent of Great Wall Drilling Company plus a multitude of specialized companies providing well services. A short negotiating period in the summer of 2005 resulted in signing of both drilling and well services for DNO in Kurdistan.

"We were very glad to get the offer to collaborate on drilling in Kurdistan. For us, it was a great challenge we had no hesitation in accepting. There is no opportunity without equal risk. If the KRG receives approval from the Government in Baghdad, DNO will be the biggest in Kurdistan, and they will discover more sources," representatives of Great Wall Drilling Company say with a smile typical for Chinese who smell fortunes in the distance.

Interacting

After signing the contract with DNO in the summer of 2005 and some three months of mobilizing equipment and personnel to Kurdistan, the Great Wall Drilling Company soon had 120 men on site and had the rig ready to spud the first well by 28 November the same year. The first well, Tawke #1, was a great success. The well tested cumulative 27,036 barrels per day from two separate reservoirs. But, by being so fast, what was the cost? "We feel that the DNO management is very good for us. They focus on safety, security and good communication. If there is any trouble, we can talk eye to eye easily. Besides, they are good at encouraging the exchange of ideas", says the Chinese. They are also eager to emphasize the CR strategy of DNO: "Health and safety are key in all of our operations. Also, to begin with, we had no interaction with the local community. Now the policy is to continuously train locals to replace our Chinese staff," they say.

No fuss

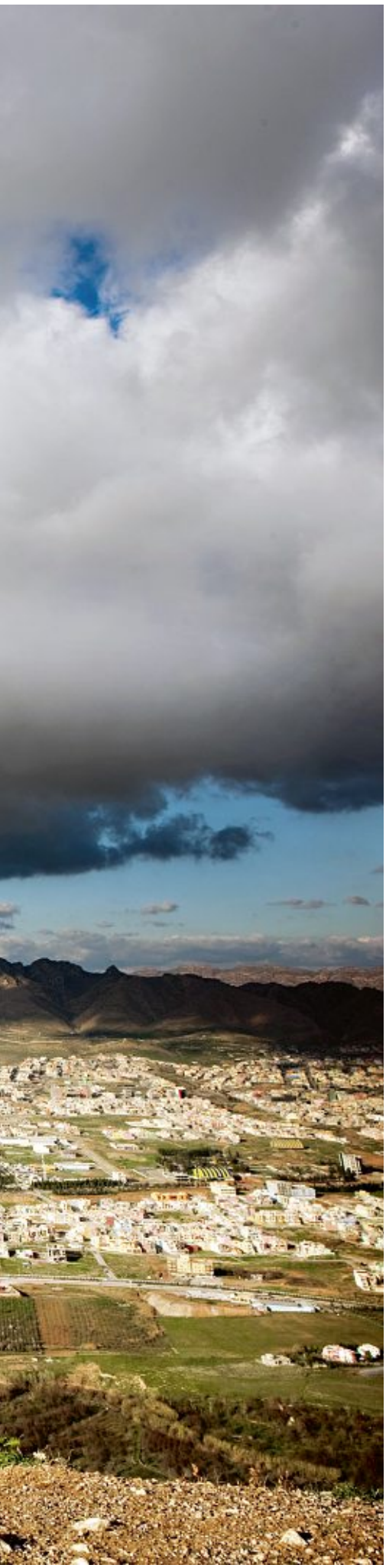
For the Chinese, friendship in business is important. "The DNO management shares knowledge, and is very friendly," they say, smiling. Their most friendly man in DNO is Charley Dunn, who is DNO's drilling manager, and their link to various well service providers. Charley joined DNO in 1999 in Yemen, then worked for DNO in Mozambique in 2004 and now Kurdistan. But his base is in Dubai, where the Great Wall Drilling Company has set up its regional head office. Mr Dunn has a petroleum engineering degree from Mississippi State University, and is a real American southerner with a relaxed attitude. "My job is below ground. What's above the ground doesn't concern me as long as it runs," he says with his smooth-as-oil southern accent. "My job is to make things run smoothly, and DNO fits me like a glove. It's an informal organization where the motto is 'Let's do it', with the minimum amount of fuss in a no-nonsense way. The only big problem here is Magne Normann," he says, and laughs out loud, as Magne pops his head round the door, eavesdropping. They've known each other for ages and work together like two eccentric uncles playing chess.

Remote and alone

Drilling for oil is not all about the right equipment. It is about interacting with a team that eats, sleeps and work together for weeks or months, in remote areas. "You know, all the easy places were taken first, long time ago. Now only the remote places are left to explore, that's why. And Kurdistan was very remote when we first started. There was nothing there within the drilling sector. We had to set all that up on our own. No service company would go in at first, but now that we have showed the way, they all come!"

Charley Dunn himself is also coming back to DNO for whatever project they might need him for: "They pay well and take care of you. I wouldn't come back unless I was treated well" he explains with a smile. ■

We will be able to supply the need of clean
water for the next twenty years.



WATER & WOMEN

Cholera and other epidemic diseases have haunted the Kurdish population. Thanks to financial support from DNO and other international sources, water supply lines are renewed and purification plants are built.

In Dohuk, near the Tawke oilfield, Governor Tamer Kocher is very pleased with the way the Ministry of Internal Affairs has allocated sufficient funds to meet his city's needs. DNO will support a water purification project in Dohuk Governorate with USD 150 million as part of the Company's obligation under its contract with the KRG. "We give priority to water purification, the upgrading of health centers and the construction of schools," says the Governor, who is very pleased to welcome DNO to his offices in the center of Dohuk city.

20 years ahead

The water project's first of two phases has been completed by a Turkish contractor. How will it benefit the inhabitants? "New pipelines have been installed from the Tigris river to the city of Dohuk. Large purification plants are built to comply with international standards to ensure clean water. So far, we have completed the first stage, which supplies 4,000 cubic meters of water per hour. Phase two will be completed at the end of 2010 and will add an additional 6,000 cubic meters per hour, and when we reach that level we will be able to supply the need of clean water for the next twenty years," he says. Until now the city is relying on water from a nearby lake close to the city itself.

Dr Avin Marouf, a doctor at the biggest general hospital in Erbil.

Governor Tamer Kocher.

To rely on open water sources is risky in Kurdistan. Three years ago, a serious outbreak of cholera hit the Kurdish capital's population of 900,000. "A sewage pipe in an overcrowded suburb for internally displaced people broke, causing contaminated water to mix with our drinking water supply from elsewhere like the Greater Zab River." Dr Avin Maroof, a doctor at the biggest general hospital in Erbil, and a member of the Ministry of Health, explains.

KRG somehow managed to get the situation under control and the newly established Directorate of Environment and the Department of Prevention in the Directorate of Health are now focused on pollution and epidemic diseases, often transmitted from sheep through yoghurt and cheese, both of which constitute a major part of the local diet.

No equipment

In spite of its efforts, the KRG lacks a budget to cover extensive maintenance and equipment within the health sector. After working as a doctor for three years in Germany, Dr Avin knows how to compare the country's health institutions by European standards: "Our main problem is not the lack of knowledge, but rather the lack of equipment. Today, for example, our X-ray machine broke down, and it's the only one we have. In addition, our equipment is outdated. It's also hard for us to attend international conferences, which is vital for keeping up to date on the latest developments in medical science." Dr Avin is not afraid to voice her concerns or to complain whenever she finds fault at her workplace: "Someone has to speak up and get things improved," she smiles.

Helping hospitals

The DNO management in Erbil is among her listening supporters. "They are one of the companies who actually make an effort. They have the power and awareness to do it. They have provided equipment to the hospitals and in Tawke they did a lot for the local village after conducting a survey to identify the village's needs. They don't close their eyes when they see problems that are not related to their specific business. On the contrary, they show a genuine environmental awareness. That is very humanitarian," she smiles.

Female power

As a powerful woman in a man's world, she is an active feminist as well, and part of the local Women Empowerment Organization. "We're a non-governmental and independent group which aims at increasing women's abilities and decision-making power in society. I also like DNO for their willingness to hire and promote women in their organization," she says.

Scala Aziz Alqasalias is one of the local women climbing the career ladder in DNO. She is a mechanical engineer, a graduate of Salahaddin University, and currently working as a project engineer. "A lot of foreign companies bring their own people out to run their offices here. DNO not only hires local men, but local women too. I am given full support and opportunities to advance," she says happily. "One day she may be the boss – seriously," says Magne Normann, visiting the office from Dubai, who would like to see more women take part in their future success. ■

1. Scala Aziz Alqasalias is one of the local women climbing the career ladder in DNO.

2. The Kurdistan region is called the bread basket of Iraq and offers a variable produce of fruits and vegetables.

A lot of foreign companies bring their own people out to run their offices here. DNO not only hires local men, but local women, too. Scala Aziz Alqasalias

GOOD NEIGHBORS

Oil is nothing new to the Tawke village Chief. Not far from his doorstep crude oil seeps out from the hidden depths where oil have been accumulating for millions of years and leaks to the surface and runs down the gentle hills in a black, rainbow-colored streams.

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In the small village numbering barely 30 families, life goes on as it has done for thousands of years. They attend to their sheep, chickens and children amongst green hills and gleaming oil.

He sits cross-legged in his spacious reception room, where the village men and we are served with sweet tea and good conversation. The view is to die for, towards snow-capped mountains in the distance. In the foreground, rolling green hills dotted with flocks of sheep. What is new is the fact that we are sitting here, a female journalist, a photographer and a group of managers from their new neighbors, the DNO oil company. "We are grateful for the water, the road, new jobs and the compensation for our lost pastures," the chief says, but adds that he would liked to have seen more money coming his way, especially in the past two years. The chief is already considered to be quite wealthy compared to his ancestors. Some of the old brick and mud houses are replaced with modern concrete buildings. Rooms are adorned with ceramic tiles, large mirrors and equipped with modern baths and toilet facilities.

The women are busy preparing a Kurdish feast in the kitchen. We move from the reception room to the dining room. Luckily, western eating habits have not yet reached their cuisine, which is our new idea of a gourmet meal. Organic, healthy and wholesome home-made food, rich in color and taste are served with all of us sitting on soft cushions on the floor.

The women join us later, at our request. The men help them clear away the leftovers, which are served to the children and women in the kitchen. To our European eyes, they are not equal to men, and we venture to ask them if they think the presence of the oil company would also bring feminism to their lives. Our interpreter thinks the question is quite daring in front of a few village men, but the women seize the opportunity to express their thoughts. "We love to meet foreigners. It's exciting for us. We like to hear your ideas and learn from them, and yes, our role in society has changed a lot the last years. We still have a long way to go, but step by step, we go forward. Now we can eat with the men and join them when they go to the city," says the eldest of them. The young teenage girls tell us they are happy, too: "We want to learn English," they say, "But our education was interrupted. There are not enough schools for our age group," they add.

DNO has provided school materials for the small village school, but that is far from solving all of their problems: "There are so many remote and tiny villages in the Kurdistan Region. They all need a local school, so we are working on it. Saddam Hussein burned down most of our educational institutions, libraries and book shops," explains Mohammed Hussein Khalid, a KRG security officer working with DNO. The oldest villagers have been through tough times. The chief tells us he has fled five times with his people to the mountains to seek shelter from violent invaders. The security is very good now. "Peace is the greatest gift," he concludes. The opportunities that DNO now bring to his land is maybe the best of all the changes he have seen in the recent past. ■

We are grateful for the water, the road, new jobs and the compensation for our lost pastures.

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1. Chief of the Tawke village is grateful for the benefits of having an oil company as their close neighbor.

2. "We love to meet foreigners. It's exciting for us", say the local village women.

3. The village kids get school material from DNO, among other gifts.

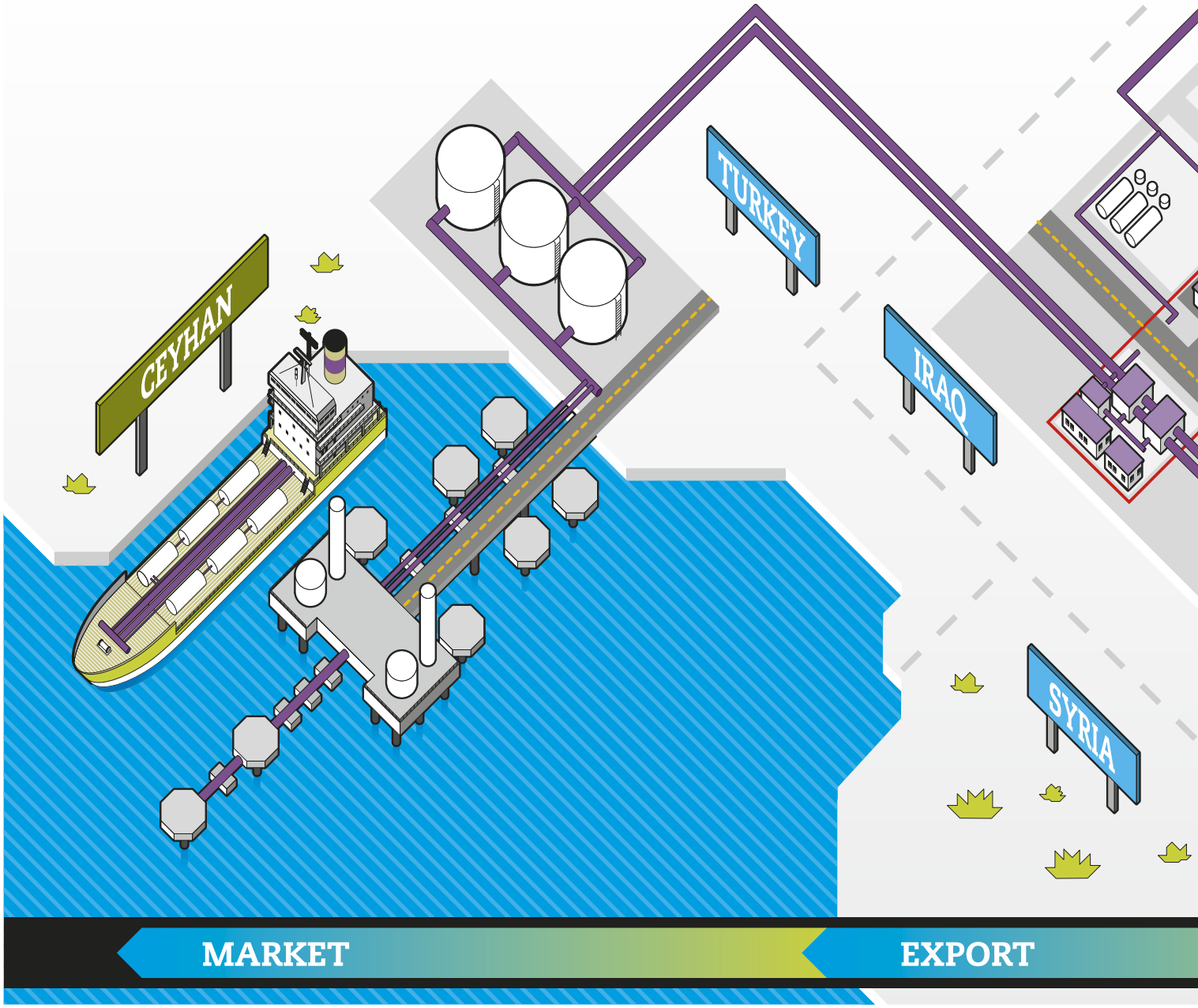
4. Oil seeps up from underground basins, a rare geological phenomenon.

HOW IT WORKS

Follow the crude oil from the Tawke field to the market.

03 CEYHAN – TURKEY

The Iraq/Turkey pipelines are 40" and 46" respectively and are able to flow up to 1.5 million bopd from Iraq oil fields to the coastal terminal at Ceyhan. The State Oil Marketing Organization (SOMO) is managing all international sales of crude oil from Iraq at present.
Ceyhan has become a hub for international crude oil distribution by sea transport to Europe and the USA. The terminal contains seven storage tanks, a jetty capable of loading two tankers of up to 300,000 metric tons deadweight (DWT) simultaneously, metering facilities, a waste water treatment plant and vapour incineration ("burn-off") facilities.

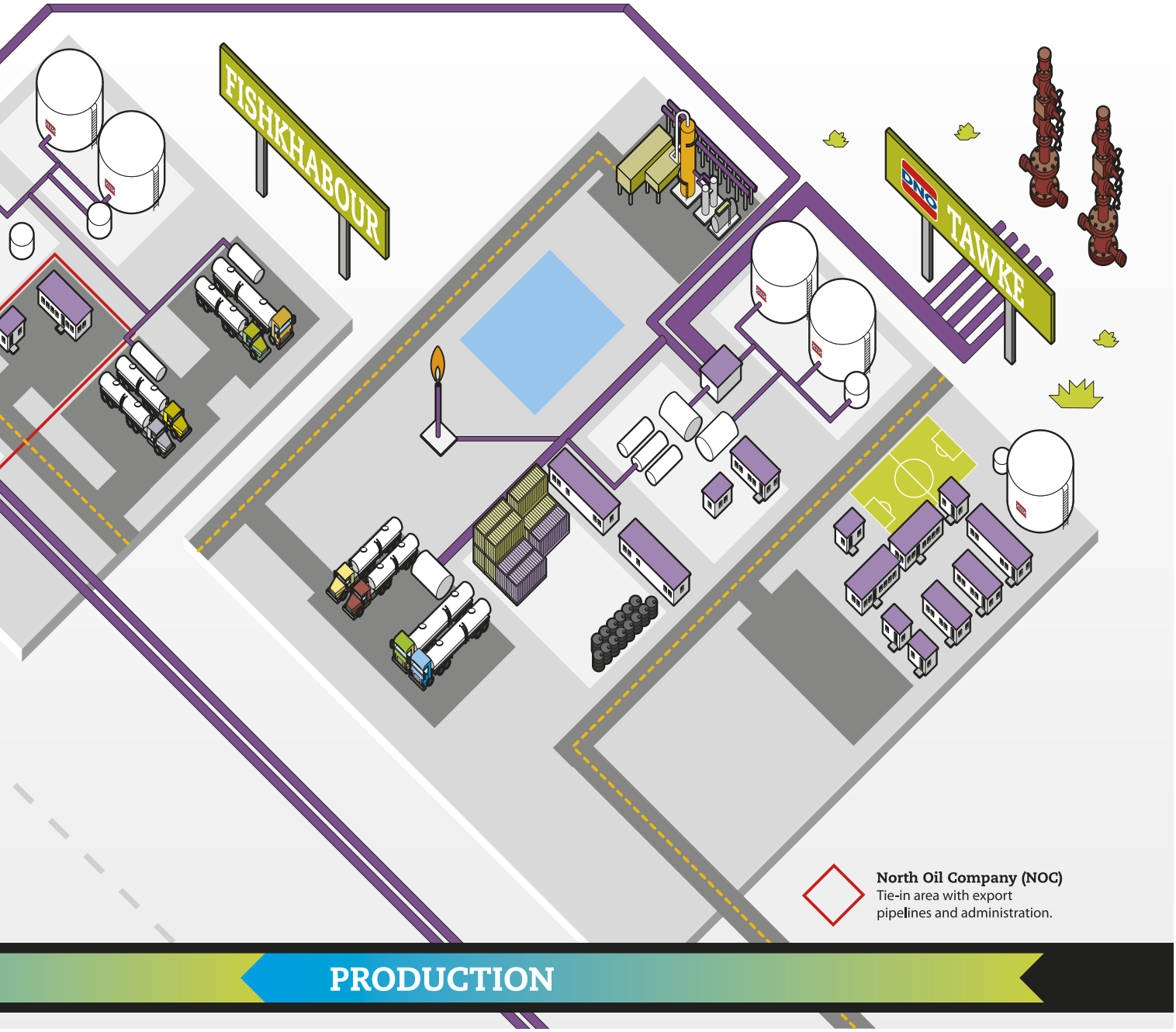


02 FISHKABOUR

Fishkhabour tie-in facilities are located about 10 km from the boarder with Turkey and Syria. The Fishkhabour tie-in facilities are operated by both North Oil Company (administered by Federal Government) and DNO. The tie-in facilities include fiscal meters to enable fiscal measurements of the crude oil delivered from Tawke. The DNO operated facilities have the ability to store 140,000 bbls in two large storage tanks. The facilities are furthermore designed as a hub to receive crude oil from other new fields in Kurdistan. Road tanker loading facility with capacity of 40,000 bopd is installed at Fishkhabour for easy access to the local market.

01TAWKE

The Tawke Oil Field is located near the city of Zakho near the border with Turkey towards the eastern part of the Tawke PSC agreement area. The drilling of the Tawke discovery well led to the planning of field development, early production and sales of crude oil. DNO acquired a pre-built process plant from the USA with a capacity of 50,000 bopd. This Central Processing Facility (CPF) is processing crude oil delivered by multiple flow lines from the individual wells drilled. Processed crude oil is then transported via a dedicated 12" by 43 km long export pipe line from the CPF to a connecting point with the two Iraq/ Turkey pipe lines at Fishkhabour for further export to Ceyhan in Turkey.



PRODUCTION

TRANSPARENT TRANSACTIONS

They are a small and independent company with a record image of striking oil and gaining revenues in a rather politically unstable region of the world.

In Dubai, DNO's Middle East office has a great view to and good connections with the international banking and finance centers.

When it comes to placing orders, we always demand at least three bids from three different vendors. Hemin Ibrahim Ahmed

Haakon Sandborg, DNO's Chief Financial Officer (CFO), is proud of his professional staff of financial officers that also function as internal auditors. They are not afraid to open any files or books to prove their compliance with all applicable rules and regulations. "Being a publicly listed company requires close follow up and reporting to the market and this is an important and time consuming task of my team in Oslo", says Mr Sandborg.

The man

"We had recruited our Financial Controller for our Dubai office from India in November 2006" says Magne Normann, Managing Director of DNO Iraq AS. The interviews of recruitment candidates took place in Mumbai, and Vinay Lakhotia was one of them; the last to be interviewed. But Mr Lakhotia turned up half an hour late, directly from Delhi, where he had managed to catch the last plane when a friend tipped him off about the job. In spite of being late, it took him only 15 minutes to convince DNO that he was the best of the five candidates being interviewed. Mr Lakhotia was offered the job. With 11 years of work experience with a service provider in the oil industry, he had a background that suited the position in DNO. But Mr Lakhotia is a man who never makes rash decisions, and asked for time to think it over. After all, the position meant moving to Dubai.

"I've never regretted it," he says, sitting behind his desk, which is in such order that you wonder if even the dust has its own designated area."I am very happy here, both with the job, my colleagues and living conditions," he says with a broad smile, and "DNO Financial Controller" printed on his business card.

Separate hands

He admits that everything in his life is in such order now that he sometimes has to rearrange his desk, take another route to work, or see a movie he normally would not see, just to make a stir: "It sharpens the brain," he says, smiling.

When it comes to his financial responsibilities and accounting procedures, there is no playing around: "Fraud is most likely in bank funds, linked to wrong payments or manipulated numbers. We have procedures to prevent any form of misappropriation or wrong payments. For instance, no payments can be made without the approval of two signatories. In other words, the person with the account creating the payment is not the same as the person approving the payment.

Golden contracts

One of the most important documents in the oil business is the PSC, the Production Sharing Contract. This is the document that states the sharing of responsibility, risk and revenues linked to oil findings and production between DNO and the government.

"There are tons of documents linked to the PSC, like procurements. The procurement tenders have to be evaluated by a financial and technical committee and approved by a management committee consisting of representatives of the local government and the license holder," says Mr Lakhotia.

At the moment, Mr Lakhotia is doing the accounting, cost

control, reporting and budgeting based on data from different teams involved in drilling, production and project administration. "When the terrain is difficult, it's a challenge to foresee the amount of equipment, geological strategies and people needed," he explains. But so far he has done a great job, according to his cost-conscious management.

Close monitoring

When it comes to procurement within the energy sector, it means at times large international services contracts as well as local service contracts dealing with tribal service providers. All major contracts are managed from the head office of DNO Iraq AS in Dubai.

Besides, Iraq – like Yemen – is a society based on tribal hierarchies. When we ask DNO's Erbil based local Logistics and Procurement Manager, Hemin Ibrahim Ahmed, how he manages this, he sees no problem: "The tribal structure is not a problem. When it comes to placing orders, we always demand at least three bids from three different vendors. In addition there are very strict rules in DNO with regard to limitations of value and approvals when procuring equipment and/or services".

In addition to the procurement principles, Mr Ahmed needs to receive an approved request with full specification from the requestor; typically the project department. His greatest passion, besides managing the procurement function, is keeping up with the history of his heritage and the Kurdistan region. After all, he was born and raised in the cradle of Western civilization, and decorates his office with archeological photos, artifacts and a blackboard with his own notes. He is interested in history and other ancient cultures. Mr Ahmed is a well known singer of local songs; he has even had TV appearances. ■

1. Dubai is a popular place to work, and DNO's office has an attractive location in Media City, a major business and pleasure hub.

2. CFO Haakon Sandborg is proud of his professional team.

3. It's extremely important to monitor every purchase, says Logistic and Procurement Manager Hemin Ibrahim Ahmed.

4. We have procedures to prevent any form of misappropriation or wrong payments, says Finance Controller Vinay Lakhotia.

RESPONSIBLE ACTIONS

Corporate responsibility is an attitude. A company that cares about their ethics, employees and the environment will benefit in the long run.

To be ethical is no longer just an extra cost, but a formalized requirement and expectation. If a company is caught causing environmental harm or violating international business ethics, it will have devastating effects on the Company's stock values and important business rankings.

New standards

The global financial market and society at large have strengthened requirements for ethical standards since early 2000, due for the most part to the Enron scandal and others that followed in its wake. As a consequence, new regulations and legislation were enforced to expand the reliability of financial reporting by public companies. Media attention and ranking lists are putting companies all over the globe under a new light. But international guidelines and requirements were not specified until 2005-2006. "That was when we started to work systematically with our team leaders to establish a corporate standard of ethics and other core values," says Ole-Andreas Isdahl, QHSE (Quality, Health, Safety and Environment) Executive.

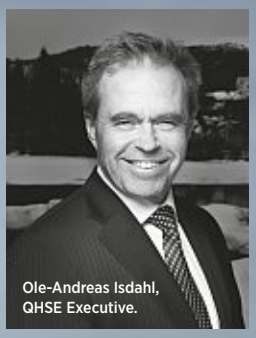
Today, guidelines are no longer enough for leading investors. Major fund managers are pushing for international standards and want to rank companies accordingly. The first CR standards will be published by the ISO during 2010 as ISO 2600, and will be voluntary to use. It will not, however, include requirements, and will therefore not be a certification standard. Nevertheless, DNO is continuously working to improve its ethics, and participates in conferences and forums aimed at expanding the knowledge of CR in every business and market.

"There are many different groups out there, and so far we closely follow EITI (Extractive Industries Transparency Initiatives), CDP (Carbon Disclosure Project), Transparency International, OECD's guidelines and Norwegian accounting and corruption laws. There is a jungle of mechanisms out there trying to influence guidelines and new standards," says Isdahl, who spends a lot of his time just trying to gain the necessary overview.

Prepared

But when the international CR standards are set, how will they affect DNO? "Corporate governance, risk management and robust business management systems have always been a natural part of our leadership style, perhaps because they are based on Norwegian social democratic values. However, we are continually expanding our knowledge and understanding within this field. Competence development, system development, commitment, implementation, compliance, monitoring and reporting are all key elements to success. We have to know in detail the contents of relevant standards, the anti-corruption law, penal code, relevant white papers and the coming ISO standard in a way which demonstrates that we are in compliance. It's no longer enough just to show good old manners," he answers.

Isdahl is more than willing to show exactly what they do by listing the different procedures DNO has implemented. Based on updated knowledge, they have developed a system for routines, monitoring and reporting which they communicate over the intranet and the internet. "Our greatest challenge is to build up the logistics and communicate the importance of following these regulations throughout the multicultural levels of our organization. Parts of our company lack the knowledge – and therefore the capability – to implement new standards," he explains.


Ole-Andreas Isdahl, QHSE Executive.

Humble

Admitting their weaknesses is an important part of their ethics. Isdahl explains why: "Since CR is a very complex and new area for many, we have to take it step by step in order to develop organizational competence and capacity. Besides, it is not about us alone. Oil exploration and production is tripartite cooperation between the oil companies, the local authorities and the interest groups. The weaknesses of and potential for improvement have to be identified and acknowledged by all parties. We are doing our best to accelerate this, but it takes time to build a company profile within CR, and we learn as we go forward," he says. ■

ROCK AND OIL

The face of Mother Earth reveals her soul. For those who can read her wrinkles and fine lines, she can no longer keep her hidden oil sources a secret.

A rock may look like a piece of dead and hard material to most of us, but for Ståle Monstad, Chief Geologist in DNO International ASA, a rock can tell a story that may be a billion years old. Besides, a rock is not always just a rock: "Rock consists of minerals, and minerals consists of elements," says Ståle Monstad, who is particularly fond of granite. There are many different types of granite, but his affection stems from his childhood among polished and dramatic granite formations in Bergen, where he took his master's degree in sedimentology and sequence stratigraphy.

Land-based fun

The Norwegian city of Bergen is a famous for its spectacular location between the oil-rich North Sea to the west and the mountain peaks to the east. DNO is not operating in the North Sea anymore; a fact which, from a geologist's point of view, is great. "Oil finds below the ocean floor are a lot of hassle. We can't see the reservoirs and have to rely on remote sensing data alone. Land-based oil exploration is a lot more fun, since we can use a lot of different approaches and tools in our investigations," he explains. Oil finds are based on geological understanding. That is why DNO has focused on making geology its core field of competence.

In Oslo, 15 highly competent geologists and geophysicists are studying maps, rock sample analyses, seismic data, well data and the results of electromagnetic searches by helicopters. They even study Google Earth photos. But analyzing data using computer technology is just one part of their job. They also trek high mountains, deserts and jungles on expeditions that resemble a new Indiana Jones film more than just another day at work. Mozambique is such a place, where Ståle Monstad has personally visited remote areas to explore DNO's vast 15,000 square kilometer license block. "We take soil and rock samples, and even use our noses to smell for hydrocarbon seeps," he says.

What they look for in rock samples are far removed from the solid granite of his childhood. The more porous the rock, the more likely they are to hold oil that has seeped up from source rock several kilometers below. The oil and gas then has to be trapped in certain rock formations such as anticlines. The Tawke Field in the Kurdistan Region is a very typical example of an anticline," says Ståle.

Creative process

Once all the data has been gathered, the geologists move from an academic and rational state to a highly imaginative and creative process. We try to reconstruct the area as it may have evolved over millions of years. We draw maps of long-lost rivers, lakes, forests and mountains and of how these have moved and changed." Ståle eagerly shows how a mountain shape is the result of slow movements of earth plates, causing extreme pressure deep down, where sediments of organic material from previous oceans end up as a boiling witches brew: crude oil.

Moving in?

When there are signs of oil reservoirs beneath the ground, they consider drilling. But drilling means moving in with crews and equipment, which in turn demands infrastructure for both transport and communication. "Sometimes, like in Mozambique, even a bottle of drinking water is almost impossible to find at this stage," says Ståle, and shows photos from his last expedition showing primitive tents in a swamp, dirt roads, shacks, and endless stretches of wilderness. "An important part of the exploration stage is to map out the local environment and resources. We do this not only for our own benefit but also from a CR (corporate responsibility) point of view. It's vital that we operate in accordance with a sustainable future for both the local communitiess and the natural environment," he explains.

Since joining DNO in 2004, Ståle has worked with all the Company's licenses and is responsible for geological quality. Africa is Ståle's fourth continent, and the most exciting one: "Everything is new to me. Every day brings a new development. Africa has a special effect on visitors because it has a special atmosphere and pulse. I love my job," he says, with a broad smile and eyes that glitter like a newly-discovered oil well. ■

Walking through dense tropical forest in Mozambique.

We take soil and rock samples, and even use our noses to smell for hydrocarbon seeps.

STÅLE MONSTAD (46)

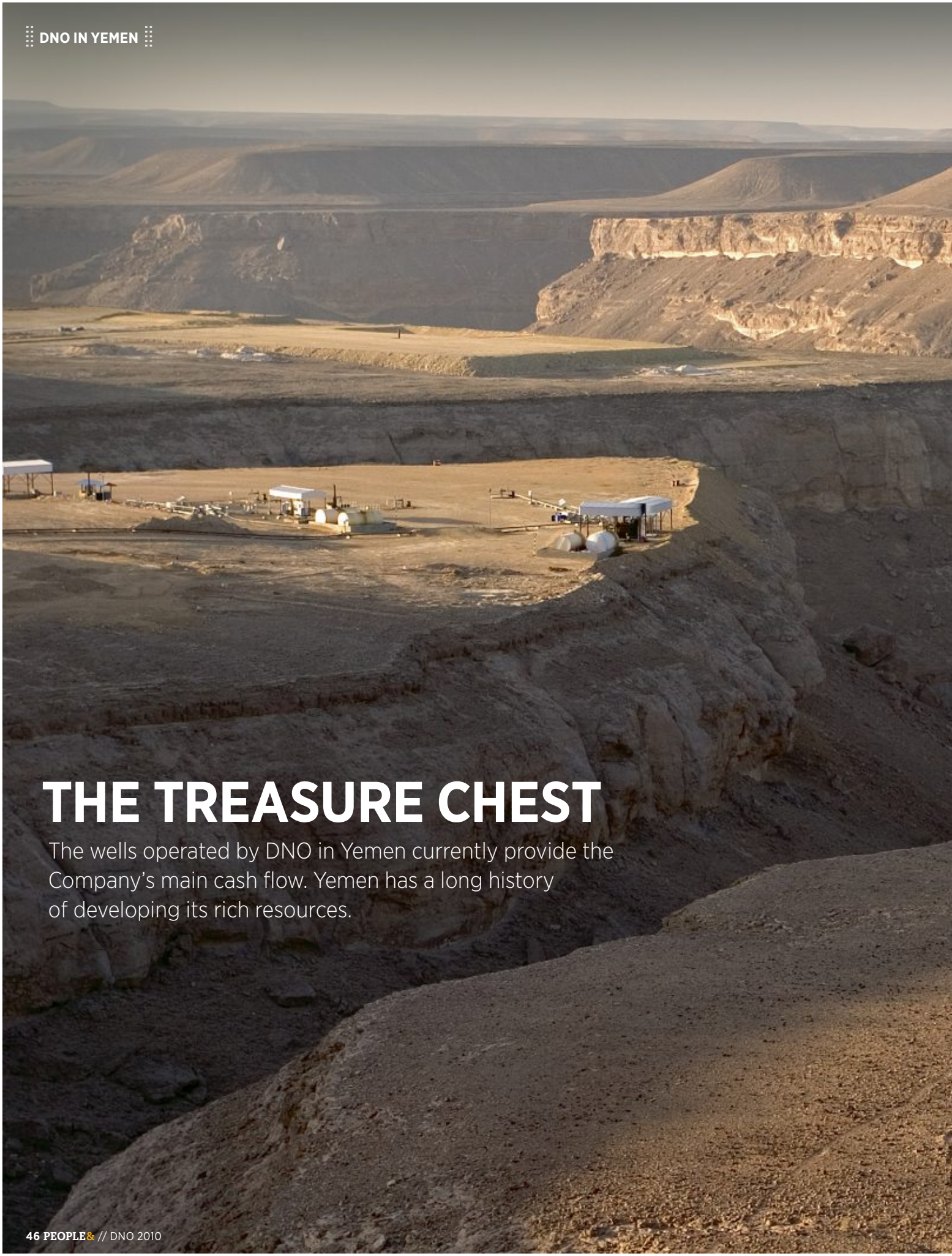
Chief Geologist, DNO International ASA, responsible for the geological quality of exploration projects

Favorite rock: Granite, because it is both hard and fractured, forming dramatic formations.

Most exciting work place: Mozambique at the moment. It's a very young rift area, maybe only three million years old.

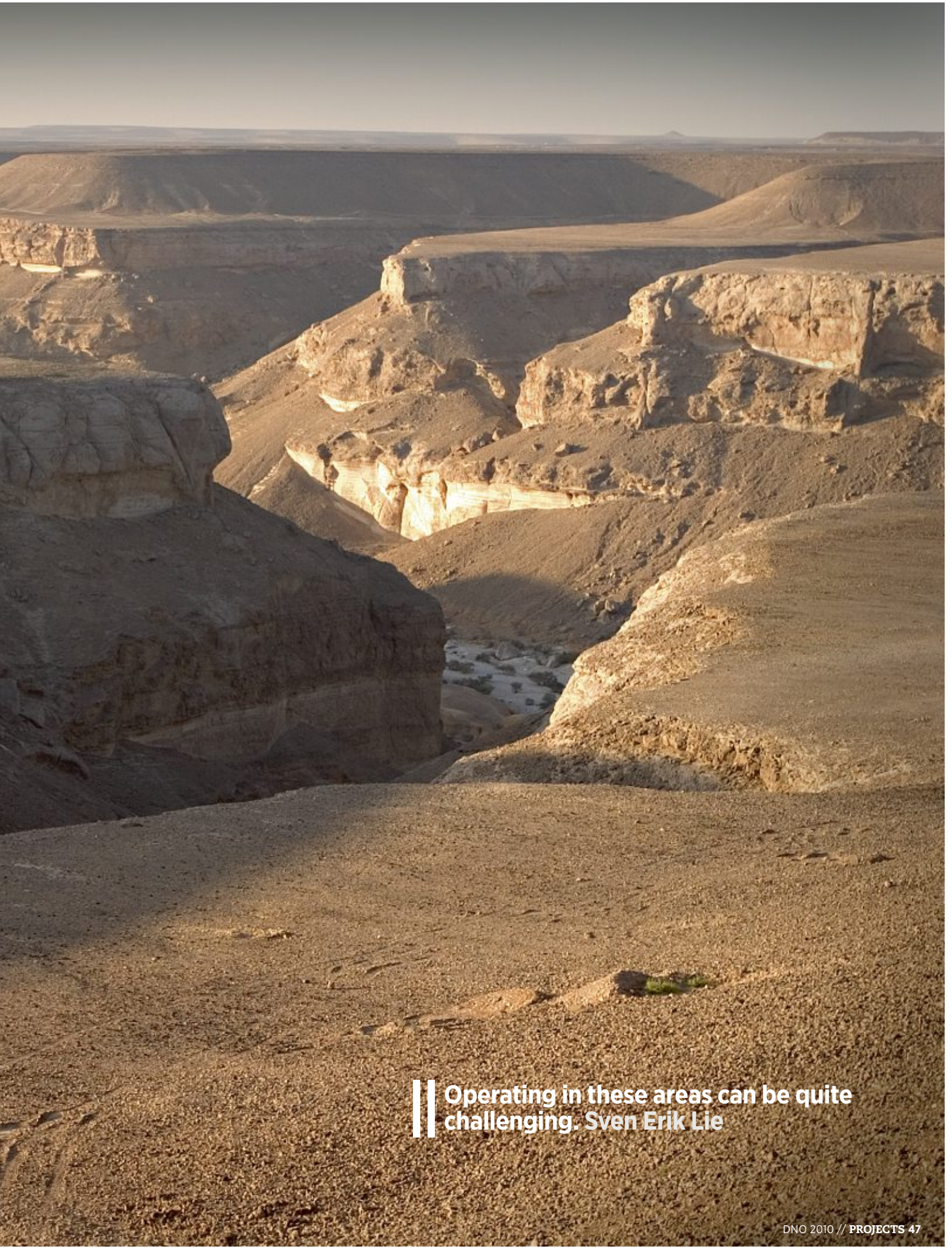
Work tools: Nose, hammer, PC, helicopter and hands.

Studying the outcropping limestones, Tawke area Kurdistan.



THE TREASURE CHEST

The wells operated by DNO in Yemen currently provide the Company's main cash flow. Yemen has a long history of developing its rich resources.



Operating in these areas can be quite challenging. Sven Erik Lie

Yemen is a good example of how we are prepared to be a proactive and an efficient operator. Tore Lilloe-Olsen

We were lucky to strike oil and get a substantial amount of production within record time. Sven Erik Lie

DNO's history in Yemen dates back to 1998, when DNO took over as operator of the Tasour field after Clyde Expro Plc Yemen. At that time, Clyde, Norwegian Hydro AS and Oranje Nassau BV had decided to withdraw from the block, as they considered the reserves to be too small to justify economic development. By end of 2000, DNO had brought the Tasour field into production, and since then, five additional fields have been brought into production within a year of their discovery: Sharyoof, Nabrajah, Godah, Bayoot and Hekma. DNO would agree with the Romans, who in 26 BC named the fertile country they found Arabia Felix (rich, fertile Arabia).

"Yemen is a good example of how we are prepared to be a proactive and an efficient operator, using the minimum level of resources and taking small steps to build up competence and technology as required. Besides, our small teams operating in remote areas are able to move from exploration to production with a minimum of handover and thus loss of momentum," says Tore Lilloe-Olsen, Corporate Head of Exploration.

Joint partners

Mr Lilloe-Olsen would be applauded by the Romans, who – unlike DNO – were defeated. DNO is highly acclaimed as a joint venture partner contributing to the country's wealth; the Production Sharing Agreements (PSAs) entitle Yemen to a substantial part of the oil revenues.

"Our policy is to always be the operator in a joint operation, based on a PSA with the local authorities, entitling them to more than 70 percent of the profit," says Sven Erik Lie, Managing Director of DNO Yemen. "We were lucky to strike oil and get a substantial amount of production within record time," he adds. It is therefore not surprising that DNO's reputation as an efficient operator has been very good since their successful start.

Tribes and control

Today DNO operates about 70 wells distributed among four blocks in the eastern part of the country in the Hadramawt Governorate, an area famous also for its historical and cultural value. The wells are situated on high mountain plateaus, creating an impressive sight, but with equally difficult infrastructure.

"Operating in these areas can be quite challenging, especially for newcomers. However, our staff have extensive knowledge and experience in all our operations, including seismic acquisition, drilling and production," says Colin Kramer, General Manager for DNO Yemen AS. The staff he refers is to the large number of locals who in one way or another are involved in DNO's operations. "The areas are inhabited by local tribes, who benefit considerably from the infrastructure, compensation and job opportunities in the wake of DNO's operations. In addition to our exploration and production activities, we also export the crude through the export facilities that are operated by Canadian Nexen Petroleum Yemen on behalf of the government. DNO and its partners have crude sales agreements with Nexen Marketing," he adds.

Mutual trust and cooperation

After the authorities have taken their share of the crude, DNO and partners have split their revenues, DNO are left with some eight to ten million US dollars per month. "Yemen is a relatively easy market for us. Since we started up over ten years ago, the same people have been working for us. This is to a large extent also the case with the authorities and our partners. As a consequence, we have developed a mutual trust and cooperation with the authorities and our partners, which benefits our operations." Mr Lie explains.

DNO has about 260 people employed in Yemen, 95% of which consists of local employees, in accordance with the national law of Yemenization. Yemen's government has adopted a program to Yemenize its oil sector, claiming it is an important step on the road to implementing the strategy to limit poverty and unemployment.

1. DNO has produced a substantial amount of oil in Yemen since year 2000.

2. Sven Erik Lie, Managing Director of DNO Yemen AS, is expecting an increase in production for a while more.

Lack of education is, however, still a big problem in Yemen, and the symptom of a deeper conflict. It is, after all, a country rich in natural resources. "For most people, Yemen is perceived to be an unknown and dangerous tribal area and a cradle of terrorism," says Mr Lie. However, DNO has always been on good terms with both the authorities and the tribes in the peaceful area in which it operates. The presence of foreign companies has little impact on or significance for the ongoing conflicts.

"None of the conflicts in Yemen are new, and they have had limited impact on our operations. However, we do take all the necessary precautions to keep our personnel and operations safe," says Mr Kramer.

Fascinating and mystical

But Yemen is not just about oil and political turmoil; it is also a fascinating country which few people get to know. For the casual tourist it is a haven of ancient history, architectural gems and warmhearted welcomes.

From almost tropical sea to green hills and barren mountains, Yemen has great natural beauty. The mountainous countryside is a geological and trekking paradise, with altitudes over 3,000 meters above sea level. Tiny villages seem to grow straight out of the rocky, gold-colored mountains. This is where the Silk Road caravans would stop on their way to Jordan, leaving behind wealth, art and knowledge.

Yemen is part of the Arabian Plate. The Arabian Shield became welded onto the African Shield by a plate collision in late Precambrian era. An extensive marine platform developed on the northeastern flank of the shield during the Paleozoic–Mesozoic eras. This platform built into the Tethyan seaway, and during late Jurassic period a unique combination of conditions resulted in the Arab Oil System. These included high organic productivity, repeated regressive shoal conditions, anoxic lagoonal oil source rocks and evaporitic seals.

Queen of Sheba

Life is still very medieval in Yemen. The atmosphere at night is magical, in the absence of neon lights and western entertainment. Water pipes, khat chewing, conversation and long meals in the light of softly lit lanterns, the sound of haunting and melancholic oud music takes you back to a forgotten way of life.

The Yemenites themselves are extremely welcoming, and curious about foreigners. For many, the presence of foreign companies is an escape from a lifestyle that offers little but poverty and insecurity about the future. According to new archeological findings in Marib, Yemen was once the promised land of the Queen of Sheba. Now its future wealth relies on oil. ■

DNO IN YEMEN

The Republic of Yemen is located on the Arabian Peninsula in Southwest Asia. It has an estimated population of more than 23 million people. More than half of the population is under fifteen years of age.

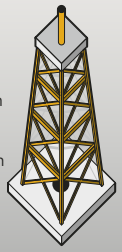
- **Yemen's economy** depends heavily on the oil it produces, and its government receives the vast majority of its revenue from oil taxes. But Yemen's oil reserves are expected to be depleted by 2017, with fears of a resulting economic collapse. Yemen does have large proven reserves of natural gas.
- **DNO's history** in Yemen dates back to 1998, when they took over as operator of the Tasour field after Clyde Expro Plc Yemen.
- **By end of year** 2000, DNO brought the Tasour field on production, and since then, five additional fields have been brought on production within a year of discovery. Today, they operate about 70 wells distributed amongst four blocks in the eastern part of the country in the Hadramawt Governorate.
- **DNO has** about 260 people employed in Yemen, whereas 95 % locals, in accordance with the national law of Yemenization.

THE BEGINNING

It is 6 August, 1971. Crown Prince Harald of Norway attends the founding ceremony of DNO, one of the first small oil companies that started off the Norwegian oil era by qualifying for participation on the Norwegian Continental Shelf (NCS). The owners were 44,000 stockholders among the Norwegian people.

HISTORY – THE QUICK VERSION

1971
- DNO was founded under the name Det Norske Oljeselskap AS to engage in petroleum exploration and production activities. It was the first Norwegian oil company to be listed on the Oslo Stock Exchange.

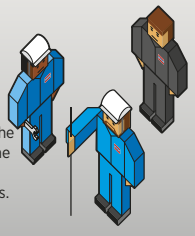


1974
- Initial revenues generated from oil production through a 6.25 percent working interest in the Heather field in UK sector of the North Sea.

1984
- DNO was one of four Norwegian companies to be awarded license interests on the Norwegian shelf by the Norwegian parliament.

1991
- The Company sold all its petroleum licenses, and in order to appear as a pure investment company the Company changed its name to DNO AS.

1995
- A fluctuating market resulted in short-term strategies and significant downsizing of the organisation. The Company had three employees.



1996
- New BOD and management team implemented strategy of focusing on the development of small oil fields and tail-end production.
- Pursuant to the new EU regulations for Public Limited companies in 1996; the Company changed its name from DNO AS to DNO ASA.

1971 was the year when oil production started in the North Sea, and this oil adventure has made Norway one of the richest countries in the world.

Positioning

In that milestone year, the founders of DNO consisted of a group of shipowners and industrial leaders led by two renowned men: Jacob Stolt-Nielsen and Jan Erik Dyvi. A widespread stock equity of NOK 43 million was used to build up the Company, which started off on the British continental shelf to gain experience while waiting for the third round of concessions expected in 1973. It found solid and experienced partners in Union Oil and Skelly, who would carry them through the exploration phase.

International

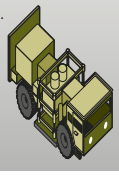
DNO's first four licenses came in 1972 for the Heather Block in the UK, which has since been their main source of income. In 1998 DNO became the full owner and operator of the same block. But DNO wanted more, and in 1971 it was also involved in drilling activities, building mini refineries in the US (albeit not very successfully) and investing in several rigs in collaboration with the Odfjell group and their deep-water rigs.

1997

- DNO became field operator on UK sector of the North Sea.

1998

- DNO acquired working interest for the first time in onshore oil fields in Yemen.



2000

- The presence in the Norwegian sector of the North Sea was re-established and DNO acquired working interests in the Jotun and Glitne fields, and the PL 203 license.
- The Company made an oil discovery in Yemen (Sharyoof).

2002

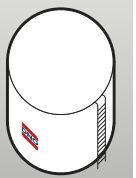
- Received approval to act as operator in the Norwegian Continental Shelf (NCS).
- Acquired 99 percent working interest and became operator on the Thistle field in UK and acquired and commenced development on Seven Heads gas field in Ireland.

2003

- DNO decided to enter into a Sale and Purchase Agreement with Lundin, for the sale of all of the issued share capital of DNO Britain Limited and Island Petroleum Developments Limited, and the sale of certain assets in Det Norske Oljeselskap AS.

2004

- In June, DNO entered into production sharing agreements ("PSA") with the Kurdistan Regional Government ("KRG") in Northern Iraq.
- DNO secured 9 new licenses in Norway and Yemen during the course of the year.



With new owners, management and strategy, DNO began a new life, often referred to as the first, second and third cycles.

Unwanted

During 1974 the Company's financial position was solid, but the third round of concessions in Norway, turned out to be a huge disappointment. In spite of its high levels of competence and experience they had gained, from the UK to the Netherlands, Spain and the US, DNO was not given the opportunity to operate on the Norwegian Continental Shelf.

Heavy losses

DNO tried to convince the Norwegian authorities that a more flexible attitude towards both private and international participation would benefit the oil industry in the long run. This strategy is almost breaking their neck. In 1977, their operation in the US failed, and the financing of other activities became difficult due to heavy losses. Moreover, their UK wells were producing no more than a fraction of what was expected. In 1979 their losses were heavy, and as a consequence the number of staff was reduced to only five people.

Prices and politics

Between 1978 and 1980 oil prices sky-rocketed from USD 12 to over USD 30 per barrel. This saved DNO, which began its battle for a piece of the action on the Norwegian Continental Shelf (NCS). A new government was elected in 1981, providing a more amenable attitude towards private initiatives.

DNO was given the opportunity to enter NCS, and was then known as 'the fourth oil company'. To make a long story short, DNO became drawn between various interests, also internally. It almost ended with bankruptcy again in 1995-96. Very little was left of their oil activities. Their stock value, which once reached NOK 445 (1973), was down to a mere NOK 5.

New owners

Berge G. Larsen, a Norwegian businessman and at the time Managing Director of Odfjell Drilling, bought 30% of DNO stock for a considerably reduced price in 1995. He turned the Company upside down and transformed it into a professional oil company by hiring a highly competent staff and management from within the oil industry. In 2000 the Company bought its way into five licenses on the Norwegian Continental Shelf and set high production estimates. Their strategy was now supported by the Norwegian Government, who had by then changed its attitude towards small, privately-owned companies. They were no longer looked upon as a threat but rather as a necessity for fully developing the Norwegian oil industry.

New strategies

With new owners, management and strategy, DNO began a new life, often referred to as the first, second and third cycles. It began by divesting the old investments made between 1996 and 2003. They capitalized on their strong position in the UK and Norwegian sectors of the North Sea, where the strategy had been to focus on developing small oilfields and to increase the

DNO FACTS

DNO's early history is told by Nils J. Heilemann, a lawyer, who not only managed the company for over ten years but who also drafted the first Norwegian petroleum act. He has also been the Vice President of OLF (Oil Industry Association), Secretary General for the Norwegian Oil Licensees Association and a special adviser to the Ministry of Petroleum and Energy.

2005

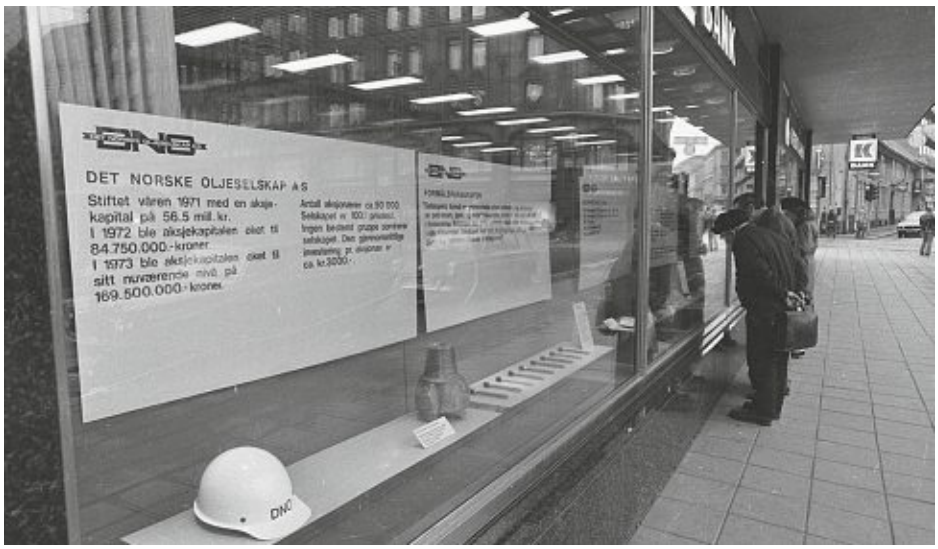
- The Company achieved significant reserve additions at low cost through successful drilling in Yemen, and production increased from start- up of Nabrajah field in Yemen.
- DNO was awarded licenses in Norway and UK.
- Initial work program started in Northern Iraq by seismic surveys and spudding of first exploration well.
- DNO delivered significant value to shareholders through two dividend payments in cash and treasury shares.

2006

- An important breakthrough in Northern Iraq was the Tawke oil discovery, which was confirmed by our very first exploration well within the area.
- The office in Dubai was opened – from where the Northern Iraq operations are managed.
- Rig capacity for exploration drilling on the NCS was secured through a 3-year contract together with a consortium of several other companies.
- DNO participated in a discovery in the Goliat field (PL229) in the Barents Sea – adding significant volumes to the reserve and resource base.

2007

- In June, production commenced from the Tawke field in the Kurdistan region of Iraq.
- The Norwegian subsidiary (NOIL Energy ASA, "NOIL") was listed at OTC.
- In July, the first well with DNO as operator on the Norwegian Continental Shelf was spudded in the Lie prospect in PL 305.
- New licenses were granted in Norway and Yemen.
- On October 8, an integration agreement was entered in order to combine NOIL with Pertra ASA (later renamed Det norske oljeselskap ASA; "DETNOR"), creating the second largest Norwegian oil and gas company. Subsequently, DNO reduced its shareholdings in DETNOR to 36.9%.
- DNO ASA changed its name to DNO International ASA – to emphasise the difference between Det norske oljeselskap and DNO ASA.



recovery rates from mature fields. The sale of their UK company and some of their Norwegian assets to Lundin Petroleum for NOK 1.7 billion yielded rich dividends for the Company's shareholders in 2004 and 2005.

Exploration

Secondly, DNO increased its focus on production to exploration in 2003. They delivered significant reserves at low costs in Yemen and Kurdistan. Cash flows from high-margin production in Yemen financed a significant part of the investments. DNO restructured its activities on the Norwegian Continental Shelf, generating a net gain of NOK 871 million.

Det norske oljeselskap

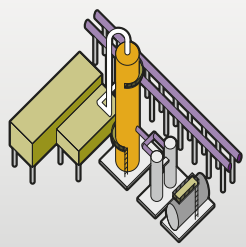
In November 2007, the Company decided to combine their activities in the North Sea with Pertra ASA (now known as Det norske oljeselskap ASA (DETNOR)), creating the second largest oil and gas company in Norway. DNO's shareholdings in DETNOR are currently at 11.66%. Activities outside of the Norwegian Continental Shelf are carried out by DNO International ASA.

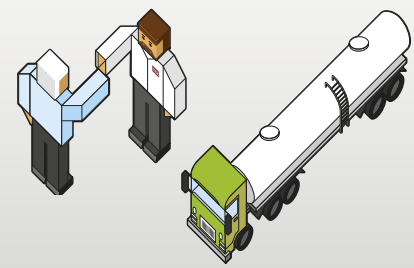
Increased production

DNO is now in its third cycle, focused on building a strong position in low-cost, high-potential areas and increasing production capacity from a large developed reserve base. It will continue to grow both organically and through active participation in consolidation opportunities. ■

2008

- DNO shifted focus from exploration towards increased production and near-term development.
- DNO responded to the change in the financial environment by initiating measures to reduce investments significantly in the short to medium term.
- The Tawke Phase 1 development was completed and commenced the remaining work to prepare for full-scale production from the field.
- Permanent development of the Bayoot field in Yemen was initiated with expected completion at the end of 2009.



2009

- In March, the tie-in of the Tawke pipeline to Iraq's northern pipeline system was completed and DNO was ready for full-scale production.
- DNO divested 11.9% of DETNOR shares, bringing the total ownership down to 25%.
- On 10 May, DNO was given formal notice by KRG to commence export from the Tawke field.
- On 1 June, DNO started initial export.