

# RasGas

MAGAZINE

Issue No 12 • July • October 2005



Personal Achievement  
**National Success**



# Pure Energy

from Qatar to the World



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Front Cover : Wakra Fort  
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# Contents

2

## Home Page

A round-up of events and news

4

## A Window to Our World

National Achievements

6

## Conferences and Exhibitions

Gastech 2005

Asian Gas Markets Conference

Finance and Investment in Qatar

12

## Future Focus

Ambitious Alliances

14

## In Focus

Personal Achievement – National Success

18

## Project Overview

A New Era - Oryx GTL

22

## Country Report

African Adventure

24

## Special Report

The city that never sleeps

28

## European Expansion

Supplying Demand

30

## Marketing Report

Bienvenida a RasGas

32

## Shipping Report

Setting Sail

34

## Inside Story

Finding Forts



2



10



12



14



24



30



32

# RasGas Employees Come to the Aid of Tsunami Victims

In response to the catastrophic devastation and loss of life caused by December's Asian Tsunami and through the requests of RasGas employees to work together to assist the victims of this disaster, in early January RasGas Company Limited launched an internal appeal for financial donations.

Through a computerised system, employees were offered the opportunity to support the appeal by donating one day's salary or an amount they could individually afford through a process of direct deductions from their monthly salary or by placing their donations in collection boxes.

As a company, RasGas agreed to match the amount raised by employees which resulted in a cheque for QR300,000 being presented earlier this month to Qatar Red Crescent Society (QRCS).

Following the presentation of the cheque, RasGas Administration Manager Abdulla Al Abdulla stated, "Everyone at RasGas was deeply saddened by the devastation caused by the Tsunami and we all felt we wanted to do something to



*RasGas Administration Manager Abdulla Al Abdulla hands over a cheque for QR 300,000 to Qatar Red Crescent Society (QRCS) General Secretary Dr Mohamed Bin Ghanem Al Ali Al Ma'adid as RasGas Public Relations Manager Abdulla Hashim and Adel Al Baker (QRGC) look on*

alleviate both the immediate needs and long-term restructuring efforts of those effected countries. We hope that through our appeal we have, in part, helped improve the situation of some of the people most affected by the disaster. We also take this opportunity to thank the

Qatar Red Crescent Society for their continuing humanitarian efforts throughout the world and in the Tsunami affected regions, as well as the people of Qatar who responded so quickly to appeals for both food and financial assistance in the days that followed the disaster." ♦

## 18.5 Million man-hours of safe work



In another major achievement RasGas main contractor CMS&A recently achieved 18.5 million man hours without a lost time incident.

To celebrate this outstanding accomplishment the RasGas Expansion Project Management Team hosted a 'Safety Celebration Lunch' in honour of CMS&A, the Engineering, Procurement and Construction contractor and their subcontracting companies, CCIC, IHI, Intech, Kettaneh, STFA, Ineco, Kaefer, Q-Con, Velosi, Ammico, Mommoet, Seashore, CB & I and QNNT. ♦

# RasGas Sharing Experience



Williamson (Second right) and other participants at the PMI-AGC presentation at the Sheraton recently

At the invitation of the Project Management Institute - Arabian Gulf Chapter (PMI-AGC), RasGas Operations Expansion Manager Gordon Williamson, recently presented a paper at the Institute's monthly meeting entitled "LNG Operations - Team Work Through Lessons Learned."

Held at the Doha Sheraton Hotel, the presentation shared actual experiences gained by the RasGas Operations Department from the start of the first two LNG trains through to the commissioning of the third train and looked ahead to the

future demands of the industry. In a frank and transparent manner, the presentation provided industry specialists with an insight into how RasGas has implemented lessons learned from several years of project operations to the benefit of the new and expanding portfolio of expansion project currently being undertaken by RasGas.

Over 80 industry specialists attended the presentation including senior RasGas officials as well as project and operations managers from companies such as Qatar Petroleum, Qatargas, Aramco, Oryx GTL and Ras Laffan Industrial City. ♦

## RasGas Hot Shots!



The RasGas Amateur Skeet Shooting team, (Back Row from left to right), Hamad A. Al Karbi, Qazi M. Rahmatullah, Ibrahim Muneer (Front Row from left to right) Joseph W. Witt, Bertie T. Duploy

Congratulations to the RasGas Skeet Shooting team who successfully beat off stiff competition from nine other teams to emerge the Gold Medal Trophy winners at

the Qatar National Bank (QNB) Amateur Skeet Shooting Championship event hosted at the Qatar Shooting Association sports ground in late May 2005. ♦

## News In Brief

### QP to set up regional fire-fighting training college

The Second Deputy Prime Minister and Minister of Energy and Industry H E Abdullah Bin Hamad Al Attiyah has approved a plan to set up a regional fire-fighting training college in the country. QP plans to begin construction of the college in early 2006 and the facility is expected to be fully operational by the first quarter of 2007.

A preliminary Environmental Impact Assessment was conducted and Ras Laffan Industrial City has been chosen as the location for the facility. The proposed institute will be a joint venture between QP, Texas A&M University and Qatar Foundation.

### Energy City for Qatar

An initial agreement has been signed between Al Addiyar Real Estate Investment and the Gulf Energy Company to establish an Energy City in Doha.

The move is intended to enhance the importance of the region as an administrative and technical centre for the oil and gas industry, and to enhance the use of natural resources.

According to the agreement, Gulf Energy will conduct economic, marketing technical and engineering studies to implement the project. Al Addiyar is a government-owned company with a capital of \$1bn, while the Gulf Energy Company is an international consortium of researchers, academics, energy experts and real estate consultants.

Work on Energy City is expected to begin in the third quarter of 2005. ♦

# National Achievements



Alex Dodds, RasGas Managing Director

The RasGas business plan outlines the strategies, goals and objectives used to propel the company forward towards its vision of being a world-leading LNG company. But a good business plan alone is not enough. Turning good intentions into concrete results calls for experience, expertise and determination, as well as excellent working practices and sound relationships with partners, contractors and employees.

Indeed, as the *RasGas Magazine* details in the upcoming reports, as our industry develops and matures, it is our experience, expertise and determination that has given us the strength to move ahead with several ground breaking initiatives.

In recent months world commodity and energy prices have soared and crude oil prices have reached

unprecedented levels. This in turn has increased the profile and stimulated major worldwide interest in the benefits of natural gas and particularly environmentally friendly LNG.

In keeping with the State of Qatar's ambitions, in May 2005 Qatar Petroleum, ExxonMobil and Edison signed agreements for a specifically constructed LNG regasification facility – the Adriatic LNG Terminal – off the coast of Italy. Included within this groundbreaking agreement, RasGas (II) has signed a 25 year Sale and Purchase Agreement (SPA) with Edison SPA for the provision of 4.6 million tonnes per annum (Mtpa) of LNG to the Adriatic terminal, with cargoes commencing in 2007.

RasGas will also be extending its global reach by providing vital administrative expertise and services to the Adriatic LNG Terminal Company.

The administration infrastructure of the terminal company will reflect the successful systems currently operating in Ras Laffan.

With the rapid pace of expansion and as new agreements are signed, the safe and reliable transportation of LNG to our customers remains an absolute priority. In early July, following her maiden voyage from Korea to Qatar, RasGas (II) proudly welcomed its latest LNG carrier 'Lusail' to Ras Laffan port to load her first cargo of RasGas LNG. With a capacity of 145,000 cubic metres of LNG, the *Lusail* is the largest LNG ship to be delivered for RasGas trade to date.

To mark yet another achievement, when RasGas' LNG carrier *Maersk Ras Laffan* sailed triumphantly into the Spanish port of Cartagena Spanish energy company, Endesa Generación SA, welcomed the first delivery of LNG from RasGas (II).

This milestone represents the first of many forthcoming deliveries under the 20 year Sale and Purchase Agreement (SPA) signed between RasGas and Endesa Generación SA in July 2003.

Oryx GTL is another success story to be added to the record of achievements realised by Qatar Petroleum in its drive to implement the comprehensive development plan set by H.H. Sheikh Hamad Bin Khalifa Al Thani, the Emir of the State of Qatar for the optimal utilisation of Qatar's natural resources.

In implementing this innovative diversification plan, the foundation stone for the first gas-to-liquids project

In today's increasingly competitive LNG industry, RasGas considers its highly skilled, motivated and multicultural workforce one of its greatest assets. Recruited from more than 36 countries around the world, RasGas staff bring a wide range of ideas and experience, which collectively form some of the best business practices in the industry.

in the Middle East, Oryx GTL was laid by His Highness the Heir Apparent Sheikh Tamim Bin Hamad Al Thani on the 7th of December 2003 at Ras Laffan Industrial City (RLIC).

This joint venture between Qatar Petroleum (51 per cent) and Sasol of South Africa (49 per cent) is the world's first commercial GTL venture outside South Africa and the first step in Qatar's quest to become the capital of the GTL industry.

Scheduled for construction completion in the first quarter of 2006, the *RasGas Magazine* met with Oryx GTL's General Manager Chris Turner and Khalid Al

Hail, Deputy General Manager to discuss this important project and RasGas' participation.

In today's increasingly competitive LNG industry, successful project development and execution requires a highly skilled and motivated workforce.

Within our organisation we have many unsung heroes, none more so than the employees who live and work onboard the RasGas Alpha. Located 100 kilometres from Doha, the RasGas Alpha is the heart of RasGas' offshore operations, we paid a visit offshore to meet these intrepid employees.

As a leading employer RasGas has also embraced and welcomed the challenges put forward in the Strategic Qatarization plan. Today, with over 50 per cent of RasGas employees Qatari nationals the company has achieved the highest level of Qatarization within the group of companies participating in the programme.

With a firm commitment to 'Quality Qatarization' the engagement of Qatari nationals has enriched our growing company with career-oriented employees who believe that the company represents in many ways their personal aspirations for the sustainable development and enhancement of Qatar. Our detailed report discusses how in collaboration with local and international educational establishments these achievements have been realised.

In addition to focusing on the development of our Qatari workforce, at RasGas we do not forget the valuable contribution made by the other half of our workforce; our direct hire and expatriate employees. Career development guidance and opportunities are a continuous aspect of our equal opportunity employment policy and we believe all employees will benefit from this approach.

In the months to come, as we look ahead to the inauguration of train 4, the launch of the Ras Laffan Helium Project and the Al Khaleej Gas project the challenges for our company will remain high. However, these new projects herald a new phase in the development of RasGas and while a business plan outlines the details, it is the commitment and support of our partners, contractors and employees that will ensure success. ♦



*Not only are RasGas committed to the national vision, the company has shifted its emphasis from simply recruiting Qatari nationals to an organisation dedicated to 'Quality Qatarization'*



# Gastech 2005 Making Things Happen

**G**astech is the prestigious international exhibition and conference for the LNG, LPG and natural gas industries. Over 5,300 senior gas industry decision-makers from 64 countries attended the 21st Gastech 2005 event in Bilbao, Spain. It provided a venue for the world's leading experts in the gas industry to discuss key issues affecting the future of LNG, LPG and natural gas, as well as providing an excellent opportunity for networking. It was an ideal event for market leading companies to showcase their products and services to a receptive audience of key decision makers in the energy sector.

Bilbao, in the Basque region in the North of Spain was the welcoming host of this energy event. It is one of the fastest growing gas consuming economies in the world. In the last decade, the Basque region has made a concerted effort to promote natural gas as a competitive conventional energy source with demand rising to 287,000 users. Corresponding improvements to the gas transmission and distribution systems are set to increase capacity by 40 per cent.

"Making Things Happen," reports *RasGas Magazine* Editor Sinéad Mangan-McHale was the key theme running through this year's conference looking at all aspects of gas projects

from financing to commercial supply and demand issues to the finer technical details. The keynote speakers made it clear that the gas industry can look forward to a period of accelerated growth and prosperity. Whilst acknowledging that there were significant challenges to overcome, they were united in their belief that the 21st century will be the age of gas.

As a leading player in Qatar's energy sector and steadfast long-term providers to this age of gas, RasGas proudly participated at this premier energy event. Dr Ibrahim B. Ibrahim, RasGas Vice Chairman welcomed H.E. Juan José Ibarretxe, President of the Basque Government to the Qatar exhibition

stand. The stand hosted participants from Qatar's leaders in the LNG industry; RasGas, Qatargas, Qatar Petroleum and Ras Laffan Industrial City. Dr Ibrahim presented Senor Ibarretxe with a replica of a Qatari traditional wind tower and H.E. Senora Ana Aguirre, Minister for Industry, Trade and Tourist Affairs in the Basque Government with a replica of a traditional Qatari clock tower. Both gifts reflected the unique Qatar exhibition stand, which represented a traditional Qatari house with two clock towers and wind towers.

Several vital developments have happened in the gas and energy industry since the last Gastech, held in Doha, Qatar in 2002. World commodity and energy prices have soared and crude oil prices have reached unprecedented levels. This in turn has stimulated major demand for gas and LNG fuelled by four key markets, China and India with new and rapidly growing markets,

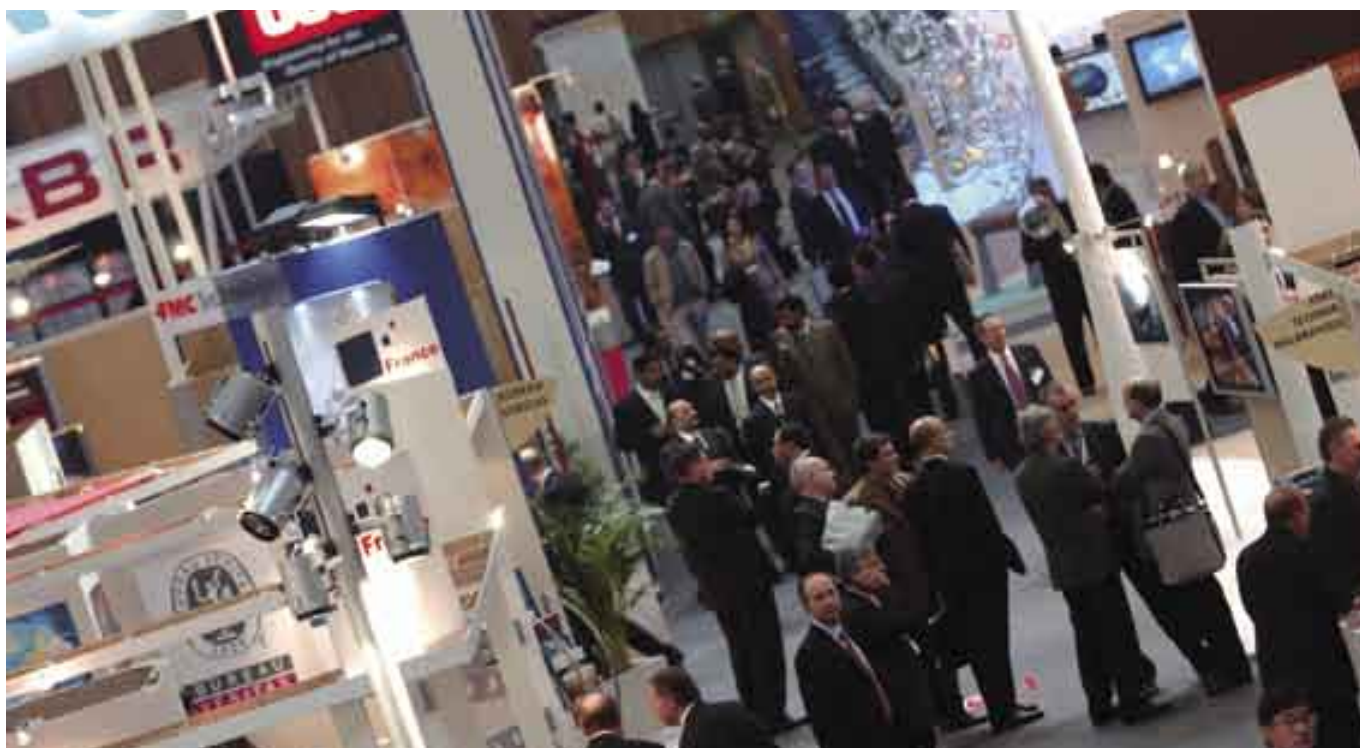


*Dr Ibrahim B Ibrahim, RasGas Vice Chairman (centre) presented H.E. Juan Jose Ibarretxe with a replica of the traditional wind tower during his visit to the RasGas stand*

## Over 5,300 senior gas industry decision-makers from 64 countries attended Gastech 2005.

and the United States of America and Europe where domestic sources of gas are depleted. As a leading LNG supplier, RasGas is meeting the increasing needs of these growing international markets and consolidated its relationship with many of its customers at Gastech.

Abu Dhabi, the capital of the United Arab Emirates is the venue for the 22nd Gastech, which will be hosted by the ADNOC Group of Companies in early December 2006. Many exhibitors have already confirmed their places for this event and RasGas will have a strong presence. ●



*"Making Things Happen" – the key theme running through this year's conference*



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# Qatar's Global LNG Strategy

## Bridging the Gap from the Reservoir to the Consumer

Maintaining RasGas' commitment to strengthen and promote the position of Qatari LNG throughout the globe, RasGas Managing Director, Alex Dodds addressed an audience of worldwide oil and gas executives at the LNG Supplies for Asian Markets Conference, held in Singapore in mid May.

The presentation - made on behalf of H.E. Qatar's Second Deputy Premier and Minister of Energy and Industry, Abdullah Bin Hamad Al Attiyah - highlighted the key elements and advantages that Qatari LNG could offer worldwide energy consumers including:

- Qatar's World Class Reserve Potential
- Regional / Logistical Advantages
- Strong Governmental Support
- Operational credibility and supply
- Financial Strength
- A leader in technology
- Flawless Execution of the existing SPAs
- A willingness to move downstream

RasGas Managing Director Dodds began by reminding the audience that in 2004 the global economy grew at a rate of 5 per cent and although this figure is expected to slow to 3.5 to 4.0 per cent in 2005 this still implied a significant growth in energy demand. "As such, "natural gas," he stated, "is well positioned to capture nearly one third of all incremental energy growth between now and 2020."

"This growth in demand," he continued, "will outpace the ability of many regions to source their supplies domestically or import via pipeline thus increasing the need to source gas over longer and longer distances which is where LNG comes in to play. The trend in gas supply and demand has grown by 15 per



Alex Dodds, RasGas MD addressing delegates at the Asian Gas Markets Conference

cent over the last 5 years (3 per cent per year) from just over 260 Bcfd to 300 Bcfd. Projecting future growth to continue at 2.2 per cent will create an excess in demand equivalent to just under 20 Bcfd of gas or roughly 125 million tonnes per annum (Mtpa) of LNG by 2010. This increase would double global LNG demand by 2010 to 250 Mtpa and further increase it to over 430 Mtpa by 2020."

Continuing he stated: "To economically meet this growing demand for natural gas, the key challenge for the industry will be to develop the scale and infrastructure necessary to bridge the increasing gap between the reservoir and the consumer. Qatar's Global LNG Strategy extends the boundaries of an LNG development project beyond the typical production and liquefaction scope to include the entire LNG value chain (from reservoir to re-gasification). Integrating and executing such projects requires not only world class gas reserves, but the people and experience to develop

the technology and execute the projects required to capture the economies of scale and economically deliver LNG across a diverse range of markets."

Within his presentation, Dodds also discussed how both RasGas and Qatargas continued to leverage their technical and operational strengths with the financial strength of the State of Qatar and their other shareholders to offer worldwide LNG buyers the flawless execution of long-term contracts and the ability to diversify and consider new opportunities quickly and effectively.

In conclusion, Alex Dodds recapped Qatar's position by emphasizing: "Qatar has set new benchmarks in virtually every aspect of LNG project development from the use of new technology, establishment of a new business model, innovative commercial arrangements, and development across the entire LNG supply chain. We believe these innovative solutions mark a 'New Era in the LNG Industry'." ♦

# Qatar the place to be, investors told



*The First Deputy Premier and Foreign Minister H.E. Sheikh Hamad Bin Jassem Bin Jabor Al Thani addressing delegates at the Third Annual Conference on 'Finance and Investment in Qatar' in London*

**I**n late May 2005, to an audience of government officials and worldwide energy officials the First Deputy Premier and Foreign Minister H.E. Sheikh Hamad Bin Jassem Bin Jabor Al Thani formally inaugurated the Third Annual Conference on 'Finance and Investment in Qatar' in London.

In his inaugural address, H.E. the First Deputy Premier said the forum has

become instrumental in the exploration and promotion of opportunities of joint cooperation between the United Kingdom and Qatari investors.

Sheikh Hamad also pointed out that Qatari-British economic relations were developing in more than one area and has made use of the institutional framework, which link the two countries together such as the Qatar British Business Forum (QBBF) and

the parliamentary group set up by the House of Commons, which comprises representatives from all active parties.

He also said that the development of these relations was specifically manifest in the area of investment in oil and gas since the current changes in the global energy market have accentuated the competitive importance of oil and gas, particularly the latter, and hence the priority given to investment in the sector aimed at increasing the utilisation of the already proven reserves and prospecting for new ones.

Sheikh Hamad added it was this trend which has consolidated the role being played by the Qatari gas sector, at present and for the future, in the course of meeting the global requirements of energy supply; thus encouraging the Qatari government to attract foreign investment.

"By 2008," said the First Deputy Premier, "Qatar is expected to provide, under projected as well as currently implemented plans, about 20 per cent of the total gas needs of the British market," which coincides with other agreements concluded with Shell Company to the value of \$7 billion to set Qatar on the track as a major exporter of liquefied gas to Europe and North America.



*H.E. Minister Al Attiyah delivering his keynote address on Qatar's investment opportunities*

**"Up to last year, investment in Qatar has totalled well over \$31 bn in various projects and has recently committed about \$26 bn in natural gas projects in partnership with a number of world class companies and investors."**

*Abdullah Bin Hamad Al Attiyah, Qatar's Second Deputy Premier and Minister of Energy and Industry*

In the area of foreign relations, he continued, "The development of Qatar's foreign relations is an integral part of the overall ongoing development in the country which clearly reflected in the continuous improvements of the micro-economic indicators, particularly the growth rates of the gross domestic product, surplus in the balance of payments and current account, general indexes of foreign indebtedness and monetary and financial stability as well as the indexes of stock markets of which the recent establishment of Qatar's Financial Centre constitute a salient feature."

This development, Sheikh Hamad Bin Jassem added, fits within the context of the years-long process of political, legal and social reforms which the State of Qatar has been diligently pursuing and expanding under the leadership of the Emir H. H. Sheikh Hamad Bin Khalifa Al Thani, and H. H. Sheikh Tamim Bin Hamad Al Thani, the Heir Apparent.

In his keynote address, Qatar's Second Deputy Premier and Minister of Energy and Industry H.E. Abdullah Bin Hamad Al Attiyah highlighted the investment opportunities Qatar has to offer particularly in the energy sector.

During his address Al Attiyah reviewed the development of the Qatari economy since the start of the industrialisation and said that up to last year, investment in the country had totalled over \$31 billion in various projects and had recently committed about \$26 billion in natural gas projects in partnership with a number of world class companies and investors. New investments in this decade are expected to rise to over \$40 billion in natural gas, petrochemicals, fertilisers and other energy sector projects. Continuing he stated, "We believe that Qatar is the place to be. We have created a healthy investment environment and carefully selected our partners and used the best technology to build safe and environmentally friendly projects."

Further reiterating Qatar's global economic position, talking at the end of the conference with local journalists Gerard Lyon, Standard Chartered Bank Chief Economist and Group Head of Global Research said, "Qatar had become an ideal country for foreign investment." Lyons continued that in spite of the challenges emanating from the Middle East, Qatar was able to overcome them and that with sound investment, infrastructure and export policies Qatar's economic growth had tripled during the last decade. ●

*Source: QNA*



# Ambitious Alliances

By Sinéad Mangan-McHale

*Representation of terminal after installation in the Adriatic. Location is approximately 17 km from Porto Levante, Italy, and water depth is 29 m*

**T**he State of Qatar has ambitious plans to become a world leader in the energy supply business. It has firmly established itself as a key player in the liquefied natural gas (LNG) sector since it began production in 1997. By 2005, annual LNG production is expected to exceed 20 million tonnes and this will increase to 77 million tonnes by 2012 making Qatar the largest LNG exporter in the world. As a pacesetter in the LNG industry, Qatar is continuously pushing industry boundaries.

In May 2005, Qatar Petroleum, ExxonMobil and Edison signed groundbreaking agreements for a specifically constructed LNG regasification facility – the Adriatic LNG Terminal – off the coast of Italy. This significant alliance

represents Qatar's strategic move into the LNG terminal and regasification business. It ensures Qatar Petroleum and ExxonMobil's presence in the whole LNG value chain from gas processing through liquefaction, shipping and LNG regasification. Qatar Petroleum and ExxonMobil each have a 45 per cent share in the LNG receiving terminal with the remaining 10 per cent held by Edison S.P.A.

RasGas (II) will play a significant role in this venture. It has signed a 25 year Sale and Purchase Agreement (SPA) with Edison SPA. RasGas are responsible for producing and transporting 4.6 million tonnes per annum (Mtpa) of LNG to the Adriatic terminal, with cargoes commencing in 2008 (once regassified, 4.6 Mtpa of LNG expands

to 6.4 billion cubic metres of natural gas). According to Alex Dodds, RasGas Managing Director, "RasGas (II) will produce and transport LNG from Ras Laffan to Italy as soon as the Adriatic Terminal is ready. This LNG will make a significant contribution to Edison's supply needs and help it achieve its growth objectives."

As part of the agreement, Qatar Petroleum and ExxonMobil have made significant upstream investments. These include a wellhead platform and seven wells in the North Field, together with pipelines to support a new 4.7 Mtpa LNG train in Ras Laffan. These developments will consolidate RasGas' reputation of providing reliable and efficient LNG deliveries.

RasGas will also be extending its global reach by providing vital administration expertise and services to the Adriatic LNG Terminal Company. The administration infrastructure of the terminal company will reflect the successful systems operating in Ras Laffan.

The Adriatic LNG terminal is a gravity based structure (GBS) and will rest on the ocean floor about 17 kilometres off the coast of Italy in the North Adriatic Sea in about 30 metres of water. This offshore terminal location, a first in the LNG industry, was a key environmental decision. All the parties involved in the partnership are genuinely committed to protecting the environment and adopting technology which will not affect the beautiful landscapes or natural resources. Indeed according to RasGas Vice Chairman, Dr Ibrahim B. Ibrahim, "The Italian authorities who are very strict on environmental issues, have given a grant to this project for its environmentally friendly design."

The construction of the gravity based concrete terminal and its LNG storage tanks will use state-of-the-art technology. The gravity based structure; (GBS) is a large hollow concrete block. It will be built at a dry graving basin in Spain. When the concrete structure is about 60 per cent complete, two large LNG storage tanks, designed using ExxonMobil's proprietary modular tank, will be slid into position inside the GBS giving a storage capacity of 250,000 cubic metres. Once in place the remaining concrete structure and topsides facilities for regasification will be finished in the dry basin. When the terminal is completed the basin will then be flooded in order to float the terminal. The terminal will be towed to Italy to be set in its permanent location in the northern Adriatic Sea, just south of Venice.

Once the GBS has been positioned a pipeline will be installed to tie it into the Italian gas distribution grid. GBS have successfully been used in the oil industry but this is its first offshore application in the LNG sector.



*The Campamento construction site at Algeciras, Spain. This -20 m deep casting basin will be used for construction of the concrete Gravity Based Structure. The LNG tanks and topside regasification facilities will integrate with the concrete structure prior to flooding the basin and towing the completed structure to the Adriatic*

**"The Adriatic LNG terminal is designed to provide Italy with a significant additional source of natural gas which will strengthen the country's regional and national economic competitiveness and diversify its sources of energy supply."**


*H.E. Abdullah Bin Hamad Al Attiyah, Qatar's Second Deputy Premier and Minister of Energy and Industry*

The terminal will be equipped with a berthing and mooring system for LNG ship unloading. It will accommodate LNG carriers delivering up to 152,000 cubic metres of LNG.

According to Dr Ibrahim, RasGas Vice Chairman, "Eighty per cent of the terminal capacity will be allocated for 25 years to process LNG imported under the RasGas (II) Edison SPA, with the remaining 20 per cent capacity available to other users on an open-access basis."

Qatar Petroleum, ExxonMobil, Edison and RasGas are working closely with the Italian Government to define the open access capacity regulations at the regasification facility. Through these joint efforts, the terminal will operate in a transparent and competitive environment.

Qatar's Second Deputy Premier and Minister of Energy and Industry H.E. Abdullah Bin Hamad Al Attiyah described the agreement as a major achievement. "The terminal is designed to provide Italy with a significant additional source of natural gas which will strengthen the country's regional and national economic competitiveness and diversify its sources of energy supply. It will create employment opportunities for the region and provide a secure energy supply for continued economic growth."

This is an exciting world-class project and one in which RasGas is proud to be a key player. Qatar Petroleum, ExxonMobil and Edison are delighted with the partnership and excited at the opportunities this tailor-made Adriatic terminal offers them, the region and the end users. 



# Personal Achievement

In the framework of emphasizing 'Quality Qatarization', RasGas has adopted a number of educational and vocational initiatives through partnerships with local and international institutions. In today's increasingly competitive LNG industry, RasGas considers its highly skilled, motivated and multicultural workforce one of its greatest assets.

Recruited from more than 36 countries around the world, RasGas staff bring a wide range of expertise and a wealth of ideas and experience, which collectively form some of the best business practices in the industry.

As a leading employer RasGas has also embraced and welcomed the challenges put forward in the Strategic Qatarization Plan. Today, with over 50 per cent of the company's workforce Qatari nationals the company has achieved the highest level of Qatarization within the group of companies participating in the programme.

## Quality Qatarization

However, RasGas is not only committed to the national vision represented by the plan. It has shifted its emphasis from simply recruiting Qatari nationals to

becoming an organisation dedicated to 'Quality Qatarization'. Focusing on this primary objective has ensured that RasGas' national employees are given the necessary development training and mentoring to hone their skills and ensure a world-class standard of professionalism.

## Success through quality

For the third year in succession, RasGas has firmly proven to be the Qatarization pacesetter within Qatar's energy sector. Adding 64 new Qatari nationals to the company's workforce is a story of success in



# - National Success

itself, but the real success has been achieved in the high standards and quality that RasGas has adopted in this process.

## **Emphasis on competency**

The commitment to implement competency based development programmes is a top priority for the management and staff at RasGas.

Just like any successful career development programme within RasGas, quality Qatarization has many conventional and unconventional facets, including education, experience and personal development.

On the educational front, RasGas has developed partnerships with five key local and international educational and vocational institutions to ensure that students acquire the necessary educational background to excel in their careers.

## **QP Vocational Training Centre**

Qatar Petroleum's Vocational Training Centre (QP-VTC), located in the Ras Laffan Industrial City, has two main programmes to train high-school graduates to become competent, highly

skilled process operators or maintenance technicians.

The Technical Preparation Programme (TPP), which graduates maintenance technicians, was developed in partnership with the College of the North Atlantic (CNA) in Canada. The theoretical foundation is given at the RasGas Vocational Training Centre. Trainees then move on to specialised training in electrical, instrumentation or mechanical streams. The specialised training is given at CNA's facilities in Canada.

QP-VTC also offers the Qatari Trainee Operator Progression System (Q-TOPS). Graduates from this programme, jointly designed by RasGas and Qatar Petroleum, are prepared to become process operators. Trainees start with technical level 2, then progress through technical level 1 to permanent positions as full field operators.

Both programmes are comprehensive and competency-based. They are conducted on the plant by dedicated shift trainers and take two years to complete. They include both classroom courses, and practical, on-the-job training within the plant and environment.

#### **Qatar University – Our national partner**

Qatar University was established to focus on ensuring high-quality education throughout Qatar. It aims to adopt curricula, technology, and teaching methods that complement and enhance the country's every changing working environment.

The administration of the university constantly reviews and improves the structure of its colleges and programmes and has developed a strategy of co-operation with domestic, regional, and international educational bodies, to exchange knowledge and experiences.

The university has been instrumental in developing qualified employees for the energy sector in general and for RasGas in particular.

#### **College of the North Atlantic – Qatar**

Since its establishment in 2002, the College of the North Atlantic – Qatar (CNA-Q) has offered a range of development programmes to RasGas, combining the Canadian curriculum with the industry expertise needed to provide students with the right skills for jobs, particularly in the energy industry.

Custom-made programmes within the Corporate Training Department on the CNA-Q campus have been particularly useful in meeting RasGas' staffing needs within its Qatarization efforts.

RasGas has benefited from numerous business and technology programmes available through CNA-Q including: Business Studies; Engineering technology and information technology courses.

#### **Texas A & M – Qatar**

Texas A & M University – Qatar (TAMUQ) is the latest addition to RasGas' partners in developing its future workforce.

Texas A & M University has a history of more than 125 years of graduating

world-class engineers – this, together with its globally recognised faculty, means that the university will play an important role in meeting the expected boom in overall demand for engineers in Qatar's oil and gas sector.

Established in 2003 as part of Qatar's Education City, TAMUQ offers bachelor's degrees in chemical, electrical, mechanical and petroleum engineering. With plans to introduce postgraduate programmes in 2006, this premier international university will have consolidated its position as a regional leader in engineering education.

By providing Qatar-based, high-quality education to young Qataris, TAMUQ has enriched energy firms in the country with the human resources needed to face future challenges and enabled its students to become competent, dynamic and qualified contributors to the development of their country.

#### **Qatar Aeronautical College**

Qatar Aeronautical College (QAC) has actively contributed to Qatarization in RasGas through providing trainees with intensive English language courses, enabling Qatari trainees to follow the latest business and technical



developments, and to overcome language barriers within the company's multilingual environment.

RasGas values QAC's role highly, because it considers that proper and adequate internal communication is a fundamental ingredient of corporate success.

The association between RasGas and various local, regional and international public post-secondary technical institutions will ultimately prepare individuals to be self-sufficient contributors to the sustainable economic development of local communities, the State of Qatar and the region.

#### In-house experience

In addition to its external academic and vocational training, RasGas has developed a family of complementary internal development programmes that are instrumental in developing the competencies of Qatari graduates and members of staff.

Work experience has also been optimised within RasGas through a set of career development programmes that prepare Qatari staff for their future careers. Personal and social development is considered another key aspect of the development of its employees

As a leading employer RasGas has embraced and welcomed the challenges put forward in the Strategic Qatarization plan. Today, with over 50 per cent of RasGas employees Qatari nationals the company has achieved the highest level of Qatarization within the group of companies participating in the programme

#### National success

In discussing the accomplishments of RasGas' Qatarization initiatives, H.E. Yousef Hussain Kamal, Minister of Finance and RasGas Chairman of the Board concluded, "The LNG production capacity of the State of Qatar is expected to grow from a projected 30 million tonnes in 2007 to 77 million tonnes in 2012. Revenues from the industry are expected to contribute nearly 50 per cent of the government's budget funding by 2010. With nearly half of Qatar's LNG production entrusted to RasGas, meeting our Qatarization objectives continues to be an absolute priority, not only to face the challenges of increasing production, but also to contribute to fulfilling the aspirations of our nation."

Further commenting, Alex Dodds, RasGas Managing Director stated, "The engagement and training of more Qatari nationals at RasGas has enriched our growing company. Today we see career-oriented, long-term commitment from employees who believe that this company represents in many ways their aspirations for sustainable development in Qatari society. This has encouraged and consolidated the company's commitment to Qatarization as an integral part of our corporate policy, strategy and priorities. It has also consolidated the personal achievements of our employees with the national success of our organisation. This is an accomplishment we can all be proud to be a part of." ♦



#### Qatarization

RasGas is one of the first companies in Qatar to achieve the 50 per cent Qatarization target set by the Qatar Petroleum (QP) Strategic Qatarization plan as envisioned by H.H. the Emir Sheikh Hamad Bin Khalifa Al Thani, and as specified in the directive from H.E. Abdulla Bin Hamad Al Attiyah, Qatar's Second Deputy Premier and Minister for Energy and Industry.

RasGas has achieved 53.1 per cent Qatarization as of 31 December 2004, exceeding its target of 51.4 per cent set last year and a year ahead of the target set by QP's Strategic Qatarization Committee. Today, 27.9 per cent of the Company's Qatari nationals are in permanent positions.

# A new Era



*Oryx GTL is the first gas-to-liquids project in the Middle East*

**T**he discovery of the North Field natural gas reserves in the early 1970s heralded a new era in Qatar's social and economic history.

With proven oil reserves of 15.2 billion barrels, over the last three decades Qatar has become an established oil exporter. However, in order to meet the world demands the State of Qatar has also sought to boost oil production by locating new reserves and investing in advanced oil recovery systems to extend the life of its existing fields. This has also meant improving exploration and production

sharing agreements with new terms designed to encourage foreign oil companies to invest in Qatar.

In addition to continuing oil exploration, Qatar has embarked on several ambitious multi-million dollar energy diversification programmes. The first, and most established was the development in the early 1990s of Qatar's liquefied natural gas (LNG) industry.

Today, while still in its first decade of operation, Qatar's LNG industry, through RasGas and Qatargas, is thriving and on course to supply 77 million tonnes of LNG per annum to world markets by 2010.

However, such vast gas reserves have also encouraged Qatar Petroleum to implement forward thinking strategies, based upon the directives of His Highness the Emir of the State of Qatar to implement a comprehensive project diversification plan for the optimal utilisation of Qatar's natural resources.

In implementing this innovative plan, the foundation stone for the first gas-to-liquids project in the Middle East, Oryx GTL was laid by His Highness the Heir Apparent Sheikh Tamim Bin Hamad Al Thani on the 7th of December 2003 at Ras Laffan Industrial City (RLIC).

This joint venture between Qatar Petroleum (51 per cent) and Sasol of South Africa (49 per cent) is the world's first commercial GTL venture outside South Africa and the first step in Qatar's quest to become the capital of the GTL industry.

Scheduled for construction completion in the first quarter of 2006, the *RasGas Magazine* met with Oryx GTL's General Manager Chris Turner and Khalid Al Hail, Deputy General Manager to discuss this important project.

### The Project

GTL is a process by which natural gas can be converted into liquid fuels or other liquid hydrocarbons by means of catalytic reactions.

Sweet and lean natural gas is cleaned further, reformed to synthesis gas (carbon-monoxide and hydrogen) and then passed at specific pressure and temperature conditions over catalysts that enable the molecules to combine, producing a sort of synthetic crude oil, which is then 'cracked' or refined to produce a range of fuels and other liquid hydrocarbons.

The first phase of the Oryx GTL project will have a production capacity of 33,500 barrels per day of GTL products. This will encompass 24,000 barrels per day (bpd) of diesel, 8,000 bpd of naptha and 1,000 bpd of liquid petroleum gas (LPG)

### RasGas and Oryx GTL

The Oryx GTL project, the largest and most technically advanced gas-to-liquids plant in the world, will consume 330 million cubic feet a day of natural gas, which will be supplied to Oryx by Al Khaleej Gas (AKG).

In March 2003, RasGas Company Limited was appointed to construct and operate the first phase of the Al Khaleej Gas Project (AKG-1) for and on behalf of ExxonMobil Middle East Gas Marketing Limited.

RasGas, on behalf of the AKG project, will install a new platform on block RLA, lay a 38 inch pipeline to bring the full well



Oryx GTL's General Manager Chris Turner (Right) and Khalid Al Hail, Deputy General Manager

stream gas to shore, and build facilities at Ras Laffan City to treat the gas and recover liquids from it prior to shipping the dry, sweet gas to Oryx GTL.

### Environmentally Friendly GTL

Oryx intends to market most of the GTL diesel to customers in Western Europe. Due to governmental pressure to reduce harmful emissions Western Europe's transport sector are increasingly turning to the environmental benefits associated with low sulphur diesel fuels.

GTL producers are also working directly with the automotive manufacturing sector to test new and even more efficient premium diesel blends. These zero per cent sulphur GTL diesels will be specifically blended to target enhanced performance and efficiency required by a new generation of diesel driven automobiles. Studies are also underway in

Europe to test the efficiency and environmental impact of diesel fuels in city bus transport networks.

Naptha produced from natural gas is very clean grade. Scheduled for sale in Asia and the Far East the Oryx naptha will offer greater efficiency and productivity to plastic producing industry. The 1,000 barrels per day of LPG produced will be jointly marketed through the AKG project.

### On Schedule

The project is currently in the construction phase of activity, we've started commissioning our utilities systems and over the course of the next 10 to 12 months we will continue commissioning various systems and move into the start up phase of plant operations. We expect construction completion in the first calendar quarter of 2006 and actual production achieved in the second calendar quarter of 2006.

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**The trend towards cleaner fuel is now firmly established worldwide, with the European Union (EU) expected to mandate zero-sulphur – less than 10 parts per million (ppm) – gasoline and diesel by 2009.**

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*Petroleum Economist, Fundamentals of Gas to Liquids.*

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### Location, Location, Location

Covering an area of 73 hectares, the Oryx GTL construction site, at its busiest, will involve as many as 6,000 construction workers, including project engineers and project managers.

An extensive amount of material and equipment will be used, including 50,000 m<sup>2</sup> of concrete for the civil works, 4,000 tons of structural steel, 25,000 tons of piping and 570 key pieces of mechanical equipment.

In the region of 300 km of electrical power cable, 200 km of electrical control cable and 290 km of instrument cabling will also be used within the plant facility.

The largest single piece of equipment will weigh 2,200 tons. Equipment is being sourced from many countries mostly in Asia and Europe, including Italy, France, Germany, the United Kingdom, Japan, Korea, India, various Middle East states, the United States and South Africa.

### Contractor excellence

Qatar Petroleum and Sasol Synfuels International awarded the US\$ 675 million lump-sum turnkey engineering, procurement and construction (EPC) contract to the multinational, French-based engineering company, Technip-Coflexip from Italy. All project agreements were concluded in January 2003. The EPC contract became effective in March 2003 after all the financial agreements were finalised.

The EPC contract is being executed from Technip-Coflexip's Italian operations based at Rome with support from Qatar Petroleum and Sasol Technology design engineers and project managers. The contractors moved on to site in September



Oryx GTL heater stacks

2003 and began site work for the construction of the plant.

### Challenges

At the time the contract was awarded the world economy was just beginning to heat up so the project has faced a number of challenges in the availability of commodities and resources. It is to the credit of the skills and expertise of our EPC contractor Technip-Coflexip that they have managed these challenges successfully and so far we are very close to our original schedule.

### Partners in Success

As a major petroleum company in the Middle East, Qatar Petroleum brings extensive expertise and resources in such fields as finance, administration, operations, gas production and supply, and in sales and marketing.

Furthermore, the relationship between Oryx and other QP joint venture partners such as RasGas is also very strong. Unique in our industry, we regularly discuss issues with these partner organisations which allow us to benefit from past experiences, best practices and also benchmark our standards and achievements in line with other Qatari joint venture organisations.

Sasol brings to the partnership unparalleled experience in the production, project management and marketing of GTL

products. They provide both technical and functional expertise, which ensures Oryx GTL is a best in class company.

### Investing in Qatar

The Oryx GTL project represents a \$1 billion dollar investment. The EPC lump sum contract is \$675 million, at the time of award the total capital costs \$952 million and if you consider the working capital for the gas itself the investment is just more than \$1 billion.

Finance is of course a critical aspect of any project. The Oryx GTL project finance is the first time that commercial financing has been used to build a GTL facility. In total 20 leading international banks scrutinised this project for viability and approved this financing arrangements.

### Overseas investment opportunity

There are many significant factors that make Qatar an attractive opportunity for overseas investors. Underpinning all the major projects is the vast natural gas



The East West piperack piping



The plant utilities area

reserves within the North Field. Secondly, Qatar has a proven track record and history of successfully working with overseas joint venture partner to execute many different projects. The facilities available at Ras Laffan Industrial City are also exceptional and provide the highest standards of infrastructure facilities for our industry.

Finally, and perhaps key to success of Qatar in attracting overseas investors is the stable political system in Qatar and the forward thinking, progressive nature of the government. Today, with the support of His Highness the Emir, Qatar is continuously assessing the future requirements of the country in terms of both industrial and social requirements and taking action now to meet those future needs.

## Multi-Cultural Expertise

At Oryx we recognise the individual skills and qualities of our employees. At the present time within our workforce we have 15 different nationalities including Qataris, South Africans, Indians, Pakistanian, Malaysian, Canadian, Egyptian, Moroccan, Sri Lankan and American nationals. These highly skilled individuals bring a wealth of experience into our company and contribute immeasurably to the successful development of our organisation.

## Future Focus

In line with the Qatarization directives issued by H.E. Abdullah Bin Hamad Al Attiyah, Qatar's Second Deputy Premier and Minister of Energy and Industry, Oryx GTL actively supports Qatarization. At the present time our workforce includes 10 per cent Qatari nationals. In addition to these existing employees 30 nationals are currently undergoing the Technical Preparation Programme at the QP Vocational Training Centre.

Over the coming years an increasing number of these highly motivated national employees will be appointed to key management and operational positions within the company.

## Worldwide GTL Production

Although many countries produce oil and gas, only a select number produce clean fuels from coal and gas. South Africa, the traditional home of GTL production, produces in the region of 200,000 barrels of CTL (Coal to liquids) and GTL per day while Shell Malaysia's Bintulu production facility produces 14,000 barrels per day.

With a production capacity of 33,500 barrels per day the first phase of the Oryx GTL project will place Qatar as the second largest GTL producer in the world. At the moment we are also in discussions with QP to develop the second phase of the Oryx project; Oryx 2 with partner SasolChevron. This joint venture would see Qatar's GTL product production capacity increase to 100,000 barrels per day.

Talks are also in the early stages with QP to develop a series of consecutive integrated GTL projects which further increase GTL product capacity to the region of 230,000 barrels per day.

## What is the history of the GTL

The basic chemistry for the GTL process has been around for over 80 years. It was first developed in the 1920s by two German scientists Fischer and Tropsch and has been employed by Sasol in South Africa to convert coal to liquid fuels to supply the South African market for 50 years. The same basic technology is used for converting natural gas to diesel, naphtha and LPG.

## Stepping Forward

While GTL technology has been around for decades, the capital intensive nature of the industry has been a barrier to the economic viability of GTL plant facilities. However, over 50 years of experience and the integration of the innovative Fischer-Tropsch GTL conversion technology plant facilities today can optimise plant design and maximize commercial efficiency.

As Qatar steps forward with its latest joint venture the world not only welcomes a new supplier of environmentally conscious feedstock for the petrochemical industry but it heralds the start of one of Qatar's largest diversification projects; Oryx GTL the energy sector's rising star.

## GTL Technology

The origins of GTL technology dates back to 1913 when a German company discovered the probability of mixtures of higher hydrocarbons and oxygenated compounds being produced through the catalytic reaction of hydrogen ( $H^2$ ) and carbon monoxide (CO).

The vision was realised when two chemists in Germany, Franz Fischer and Hans Tropsch, developed a unique process to produce synthetic fuels (synfuels) from coal in the 1920s. In 1923, Fischer and Tropsch published the first findings of their results of producing synthetic gas (syngas) from coal using an alkali-iron catalyst. These chemists continued with their research and development throughout the 1920s, experimenting with different catalysts, pressures, temperatures and reactor designs.

The FT process was used extensively in Germany between 1932 and 1945 to produce synthetic petroleum and diesel. In this process, coal – in the presence of steam ( $H^2O$ ) and oxygen ( $O^2$ ) – is gasified to produce a mixture of CO and  $H^2$ , syngas, the primary building block that is purified and converted further to produce liquid synfuels and other hydrocarbons.

The FT technology was commercialised in 1932 in the Ruhr Valley by Ruhrchemie, a German chemicals company. Ruhrchemie worked in partnership with other German technology companies, notably Lurgi Gesellschaft für Warmetechnik (Lurgi). These companies later sold the rights to South Africa's Sasol to use unique German technology to gasify coal and convert the resultant syngas into liquid products. ♦

*Petroleum Economist,  
Fundamentals of Gas to Liquids*

# African Adventure



*The Kruger's 1,500 lion are found throughout the park but tend to congregate in the south-central grasslands, feeding ground for the herds of herbivores on which they prey*

South Africa is a vast and enchanting country, full of colour and excitement. South Africa lies at the southern tip of the African continent and is bordered by Namibia, Botswana, Zimbabwe and Mozambique.

It is roughly the size of Spain and France combined with wide range of attractions, history, culture and events to attract tourists the world over.

Often described as a 'world in one country' South Africa's geography, culture

and climate is as diverse as it gets. While the country continues to heal racial divisions, the determination of her people to begin anew, makes it an inspiring and beautiful place to explore. Since the days of apartheid, South Africa is emerging as



*The City hall is approximately built of Table Mountain sandstone; its clock is a half-size replica of London's Big Ben*



*The Kruger National Park, stretching across the eastern part of the Mpumalanga and the Northern Province, is home to hundreds of different kinds of mammals and birds*

a thriving nation. It now takes pride in celebrating the heritage and traditions of the many African cultural groups who form the colourful and diverse South African nation. There are eleven official languages, nine Bantu tongues, English and Afrikaans and is home to more than 43 million people. This new South African nation is a conglomerate of beliefs, traditions and heritages living in a country of breathtaking beauty.

There are many reasons to visit South Africa for a holiday of a lifetime. From the crashing waves of the Western Cape to the warm Indian Ocean waves of the Kwa-Zulu Natal coast, the exciting and thrilling safaris in the enormous Kruger National Park, the mountainous terrain of the Drakensburg to the bushveld of Mpumalanga, the scenery is truly stunning.

Conservation measures over the last century have guaranteed South Africa some of the finest wildlife reserves in the world. The challenge of sighting 'Africa's Big Five' – lions, leopards, rhino, elephant and buffalo – is one of the greatest thrills of a Safari trip. And South Africa has plenty of safaris on offer. This term 'Big Five' originated from hunting jargon for the most dangerous and sought-after trophy animals. Nowadays the intrepid traveler is content to simply observe Africa's wildlife in their natural habitat. A trip to Kruger National Park is a must on any visit to

South Africa. This famous game sanctuary stretches for 352 km (220 miles) along South Africa's northeastern border. This conservation area supports an astounding array of wildlife, flora and fauna. When visiting South Africa's largest national park one can choose from the luxury of a Private Game Reserve where expert rangers are on hand to guide the explorer through the African plains and then return them safely to luxury accommodation.

Other, more independent travelers may opt for a visit to Rest Camps for what is known as a D.I.Y. (Do It Yourself) safari option! Rest Camps are cheap state owned accommodations and they are well placed throughout Kruger Park.

Once you have experienced the wild life reserves, there is plenty more on offer to tempt and delight. For the energetic traveler, South Africa offers an abundance of sporting delights to both spectators and participants alike. There are few who have not heard of the might of the South African rugby team and still fewer countries that have recently beaten this magnificent team on the rugby pitch. For the more sedate, South Africa boasts some of the finest golf courses in the world and has also produced some of the worlds finest golfers. The golfing prowess of Gary Player is legendary while Ernie Els ranks among the top golfers in the world and recently won the Qatar Open. South

Africa's coastline offers superb opportunities for water sports enthusiasts in particular the surfer; Cape Town is also a popular port of call for round the world yacht races.

The Cape Province is considered by many to be one of the most beautiful places in the world. It lies on a small peninsula at the southern tip of Africa. Cape Town with its cosmopolitan history and atmosphere is the premier tourist destination and the fourth largest urban center. The infamous Table Mountain looms over Cape Town city. This rugged mountain chain stretches to a height of 1,087 m above sea level and dwarfs the high-rise buildings of the city. Several hiking trails lead to the top whilst for the less adventurous there is a leisurely cable car ride to the restaurant at the top.

When considering how to get around this vast country do not forgo the opportunity to travel on the famous Blue Train. The Blue Train is unique – not just as one of the world's finest hotels but one that moves from destination to destination. For over 50 years travelers have enjoyed luxurious train safaris, with unhurried journeys through some of the most scenic routes in South Africa.

Visitors from Qatar can fly direct to Johannesburg and Capetown with Qatar Airways who have four flights per week. ●



South Africa's famed Blue Train, the ultimate in luxury travel, makes its way through eastern Mpumalanga



The Eastern Cape's Wild Coast, which runs from a point north of East London to KwaZulu-Natal, is famed for its sandy bays, its lagoons, estuaries, cliffs and rocky reefs



# The City that never sleeps

Imagine working 12 hour shifts daily, living, eating and playing day in, day out with your co-workers for 28 days at a stretch, about 100 kilometres out at sea with no hope of stepping on land until a helicopter comes to fetch you when your 'tour of duty' is completed.

Sounds painful? The good news is, you get to stay in 'four star' hotel-like accommodation (as described by one worker) while out at sea, good pay, plus a free air ticket and the next 28 days off work to see loved ones back home, wherever they may be. And don't forget, you are spared the daily commute to and from the

office – which means you can get up half an hour before work, wash and get dressed into your coveralls in 10 minutes, spend the next 20 minutes leisurely tucking into a buffet breakfast prepared by professional chefs, and still be at work on time!

While this may seem a whole different world for those of us who work normal office hours and go home to our families every night, it is life as usual for most crew members working on an offshore platform – as Dawn Lye, Features Editor for Marhaba, Qatar's premier information guide found when she went on a tour recently around RasGas Alpha.



### The skyscraper in the sea

Alpha is RasGas' first and only offshore production complex, processing 1.2 billion cubic feet of gas per day and sending the dry gas via a 96 kilometre long, 32 inch diameter pipeline to RasGas onshore LNG plant for export all over the world. A mammoth steel edifice stretching 800 metres across, with wells reaching approximately 12,000 feet beneath the seabed and with structures rising 260 feet above sea level – RasGas Alpha is a virtual skyscraper at sea. It comprises four main structures connected by bridges: a drilling/wellhead platform; a process utility platform where the gas is dehydrated; a riser platform for receipt of gas from remote wellhead platforms and for dispatching processed gas to onshore; and a five storey living quarters platform with helideck.

The US\$ 300 million complex took three years to build, with the construction taking place in the US and Dubai. It was then shipped to Qatar and installed according to world-class standards.

Staff onboard are currently made up of 15 nationalities, including people from India, Pakistan, the UK, South Africa, Canada, Nepal, Philippines, Malaysia, Sri Lanka and also from Qatar. They come from all walks of life and include engineers, technicians, chefs, mechanics, electricians as well as a medic.

### Helicopter commute

While it is possible to reach the platform by boat, the journey takes several hours.

Hence, everyone who visits Alpha – or any of the other oil and gas platforms around Qatar – has to go on a helicopter. For the commute, everyone is treated to the usual procedures. Check-in is much like that for taking an airplane, except that you put on a safety vest, get a pair of earplugs and watch a safety video before you board.

Throughout the flight all baggage is stowed away and no loose items are allowed in the cabin, which means you can't take along a book or newspaper to pass the journey time. Indeed, while the idea of being on a helicopter sounds exciting, with the constant, monotonous whirring from the rotor blades, the ride itself is surprisingly sleep-inducing. In fact, throughout the 45 minutes ride, the majority of passengers fell into a dazed stupor. Passengers in two designated seats have to put on headsets, which allow them to communicate with the two pilots and convey their messages to the others.

### The safety issue

Upon touchdown at Alpha's helideck, we were each given a hydrogen sulphide detector. About the size of a pager, it is carried by everyone onboard the platform to detect any leaks of the highly poisonous and flammable gas. Alpha produces gas from Qatar's North Field that contains about 6 to 8 parts per million (ppm) hydrogen sulphide, considered a very high proportion. In addition to the personal detectors, there are 288 hydrogen sulphide



*Work goes on 24 hours a day, 7 days a week onboard the RasGas Alpha*

metres located all around the platform where the gas first emerges from underground.

We were also issued with red coveralls, safety boots, safety glasses and a hard hat before the platform chief, Offshore Installation Manager Atul D. Dhokte, gave us a guided tour.

Safety is a critical issue at offshore platforms all over the world, and it was no different onboard RasGas Alpha. Gas, fire and thermal detectors, fire-fighting systems and escape sets (essentially air tanks fitted with masks) abound onboard. If excess gas is detected alarms go off, the platforms shut down and the wells are closed. Gas is then directed towards the flare stack where it is safely burnt off. However, after seven years of operation, Alpha has seen only one emergency shutdown, which occurred in the first year of operations, when it was still essentially being 'run in.'

Alpha is also built so the living area can be entirely shut off from the wellhead and process platforms, providing a safe haven for the crew. Alcohol is prohibited and smoking is allowed only in certain areas. There are three escape boats, each with a capacity of 52 passengers. In addition, every crew member is trained in first aid and regularly undergoes safety related courses.

The harsh summer heat creates another safety factor that the workers need to



*Avoiding the rush hour traffic – 100 km from Doha*

beware of. During the hottest months, when temperatures can hit 50 degrees Celsius and more with heat generated on the platform, they are not allowed to work beyond 45 minutes at one stretch to prevent heat exhaustion and dehydration.

All these safety measures have added up to an impressive safety record; with over six and a half years without a Lost Time Accident (LTA) since Alpha started operations in October 1998.

### Work environment

Alpha, being a gas platform, doesn't carry the heavy odour of petroleum that is so prevalent on most oil platforms. However, in some areas, the air vibrates with the rumble of pumps and compressors, and earplugs are recommended.

Work goes on 24/7. Besides the platform's main task of processing gas for delivery to the onshore LNG plant it also desalinates seawater to produce potable water for the living facilities and generates its own electricity. Three gas turbines generate electricity to power the Alpha complex as well as three remote wellhead platforms situated 5 to 18 kilometres away from the Alpha complex. Two of these remote wellhead platforms send gas to Alpha for processing and the third sends approximately 800 million cubic feet per day of untreated or 'wet' gas daily to the onshore facilities. Gas flow from all of the remote wellhead platforms is controlled from the Alpha central control room and the Alpha staff provides all maintenance for these facilities. In 2005, two additional remote wellhead platforms will be added to the RasGas offshore facilities, with at least four more in various stages of construction to be installed and producing by the end of 2009.

Much of the work at the platform is automated. For example, to produce gas, someone at the main control room just hits a switch, and the remote-controlled valves will open to allow gas to start flowing in from the wells into the pipes. Whether the valves are opened fully, or which wellhead



*Onboard chefs serve an extensive international buffet at every meal*

to produce – all these are also implemented at the control room at a touch of a button. However, the monitoring of gas migration from one area to another is carried out by RasGas' onshore Reservoir Engineering Department, which advises the staff on Alpha about how much gas to produce from each well.

With gas from Qatar's North Field estimated by some accounts to last for 200 years, RasGas employees have a bright future, which includes significant expansion plans and challenging work opportunities. In fact RasGas expansion is already ongoing and by 2009, offshore operations will include ten wellhead platforms with 70 wells producing approximately 8.5 billion cubic feet of gas per day.



*Snooker, darts and table tennis are popular pastimes offshore*


### Life onboard

Having a job offshore means living in close quarters with colleagues and no chance of running out to the convenience store on a whim. A supply ship from Ras Laffan comes by the Alpha Complex once a week, bringing in some 8 to 10 tonnes of food, drinking water, equipment and diesel. But an in-field support vessel on duty within the field area can make emergency deliveries of equipment or materials.

Among the 45 strong crew on board, only four – the manager and supervisors – work a seven-day-on, seven-day-off rota, with most of their families based in Doha and Al Khor. All platform employees work 12 hour shifts, with two half-hour breaks and an hour-long lunch break in between. The crew members – three at a time – take turns to work the midnight shift.

Rooms are compact but comfortable, and each is furnished with a TV, radio, sofa and an en-suite bathroom. The crew usually sleep two to a room, or they may get a single room. With 104 beds available, seldom do they need to sleep four to a room.

A sick bay and medic are available to those who are ill. For recreation, the workers use the gymnasium, play snooker, darts or table tennis, use the Internet room, read the newspapers, or watch TV and hang out in the lounge. Two to three chefs make sure the workers are well fed, serving up an extensive international buffet at each meal. Even though they are away from home, the workers can request the foods they miss and pass favourite recipes to the chefs.

Besides the various advantages that make up for the workers' long absence from home, an extra perk lies in store at Alpha for those who love marine life: all kinds of aquatic animals, including dolphins, can be seen from the platform, and in the warmer season, schools of 60 to 70 whale sharks (the world's largest fish, but which are harmless to people) at times surround the platform at night. The sight, says Manager Atul, is indeed one to behold! 

# Supplying Demand

**RasGas (II) and Distrigas sign a 20-year agreement for LNG supply**



*RasGas and Distrigas officials following the signing ceremony*

As technological innovations have lowered liquefied natural gas production costs and with oil prices continuing to soar LNG has finally earned its position as a commercially sound, technologically safe and reliable element in the global energy market.

As the world continues to turn its attention to this environmentally friendly fuel and LNG projects become increasingly viable the radius of LNG supply potential has also increased. Today, RasGas' global supply network includes Sale and Purchase Agreements with geographically close partners, Petronet of India as well as our partners, KOGAS further afield in Korea.

Europe is becoming an increasingly attractive market as its indigenous gas resources are declining and its upitite for LNG is growing.

In continuing to pursue its vision to diversify supply and become a global supplier of LNG, in February 2005 RasGas (II) announced the signing of

yet another international supply agreement with Belgian energy supplier, Distrigas.

Pursuant to this agreement, Distrigas will import approximately 2.5 billion cubic metres of natural gas per year, equivalent to approximately 2.05 million tonnes per annum (Mtpa), from

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The Belgium terminal will give us access to an established, robust market place in Europe which has an existing infrastructure and existing commercial arrangements which allows RasGas to be very competitive.

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*Alex Dodds, RasGas Managing Director*

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Qatar on an ex-ship basis to be delivered at the Zeebrugge LNG terminal for a period of 20 years starting in early 2007.

This important agreement will enable Qatari gas to reach new markets in North West Europe and is consistent with the State of Qatar's long-term strategy for expanding and diversifying its natural gas markets. This agreement is a major achievement for the State of Qatar and highlights a successful joint-effort between RasGas (II), its shareholders Qatar Petroleum and ExxonMobil, and Distrigas.

The Distrigas agreement also represents another important step by RasGas to become a leading supplier of LNG to major markets in Europe, the United States and the Asia Pacific region.

Last summer, Distrigas contracted the necessary capacity for the new contract at the Zeebrugge LNG terminal which is due to be expanded in 2008.

H. E. Youssef Hussain Kamal, Minister of Finance of the State of Qatar and Chairman of the Boards of RasGas, stated, "We are delighted to add Distrigas to our portfolio of customers. The strategic location of the Zeebrugge LNG terminal associated with the liquidity of the Zeebrugge Hub and the quality of the Belgian gas market make this deal a true success for RasGas."

Alain Janssens, Chief Executive Officer of Distrigas, declared: "This new contract underlines the importance of LNG in the diversification of Distrigas' supply portfolio. We already have an expertise of more than 20 years in this field. Thanks to this contract, LNG will continue to play an important part of Distrigas' long term supplies." ♦



*Distrigas Chief Executive Officer, Alain Janssens and H.E. Yousef H. Kamal, RasGas Chairman*

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*Yousef Hussain Kamal, Minister of Finance and RasGas Chairman*

### **Distrigas at a Glance**

Distrigas, part of the Suez Group, is a natural gas merchant company listed on the first market of Euronext Brussels. Benefiting from its strategic position at the heart of the European gas networks, the company is now active in Western Europe. With a strong experience of 75 years, Distrigas has developed a real partnership with its customers-industries, distribution companies, electricity producers and natural gas resellers.

The company sells more than 23 billion m3 of natural gas per year, of which a substantial part is sold outside of Belgium, its home market.

In addition to the sale and trading/arbitrage of natural gas, Distrigas is also active in the marketing of transit and international transport capacity and in LNG trade and shipping.

In Europe, Distrigas is one of the pioneers in LNG, with more than 20 years of experience in LNG imports.

# Bienvenida a RasGas

RasGas' LNG carrier Maersk Ras Laffan sailed triumphantly into the Spanish port of Cartagena in April 2005. Its LNG cargo was welcomed by Spanish energy company, Endesa Generación SA, as the first delivery of LNG from RasGas (II). This milestone represents the first of many forthcoming deliveries under the 20 year Sale and Purchase Agreement (SPA) signed between RasGas and Endesa Generación SA in July 2003.



From left: Ignacio Dominguez, Chief Executive Officer, Endesa; Alberto Hernandez, Gas Manager, Endesa; John Travia, Head of LNG West of Suez, RasGas; Alvaro Franco, Gas Analyst, Endesa; Safiya Al Hajari, Commercial Officer, RasGas; Eric Sweeney, Commercial Manager, RasGas; Srdan Silic, Marine Superintendent, RasGas, at the presentation onboard the Maersk Ras Laffan

The SPA between RasGas (II) and Endesa was notable not only for the speed in which the negotiations were concluded, but that it was the first time in the LNG industry that a buyer and seller have signed a SPA unconditionally. Endesa is one of RasGas' growing base of ex-ship customers, with RasGas responsible for transporting LNG from Qatar initially to Cartagena and ultimately to Sagunto in Spain.

During this 20 year contract, RasGas (II) will supply 0.8 Mtpa (800,000 tonnes per annum) of LNG. RasGas will supply this agreement from Qatar's giant north field, which has recoverable reserves of more than 900 trillion cubic feet of non-associated gas.

The inaugural delivery was celebrated onboard the Maersk Ras Laffan LNG carrier. Joining the RasGas representatives were Ignacio Dominquez,

Chief Executive Officer of Endesa and Alberto Hernandez, Endesa's Gas Manager along with the Enagás Terminal Manager and representative's from Enagás management based in Madrid. Enagás SA is the Spanish receiving terminal company responsible for the storage and send-out of regassified LNG to end-users such as power stations.

Making the presentation on behalf of RasGas was Ms Safiya S. Al Hajari

representing RasGas and Qatar. Ms Al Hajari administers the Endesa SPA on behalf of RasGas with the additional responsibility of being the customer's focal point within RasGas. On behalf of RasGas management and to commemorate this auspicious occasion, Commercial Manager Eric Sweeney presented Senor Dominquez with a traditional Qatari golden dhow.

Other wooden dhows were presented to the Captain of the *Maersk Ras Laffan*, ship-owner's A.P. Moller and to representatives from Enagás. Other attendees from RasGas were Srdan Silic, Marine Superintendent and John Travia, Head of LNG West of Suez.

The *Maersk Ras Laffan* arrived at Ras Laffan port from Samsung Heavy Industries (SHI) in Korea in April 2004. She has a capacity of 138,000 cubic metres and is under a twenty five year charter agreement to RasGas. The *Maersk Ras Laffan* is the second in an expanding fleet of specifically designed LNG carriers under charter to RasGas to meet its increasing international ex-ship customer base. Traveling at a speed of 19.5 knots, and operated by A. P. Moller, it took her only 13 days to transport her valuable cargo from Qatar to Spain. The *Maersk Ras Laffan* will make 13 round trips to Spain each year to fulfill the conditions of the SPA, traveling a distance of 4,800 nautical miles each trip inclusive of a Suez Canal transit in each direction.

Endesa Generación commemorated the cargo delivery by presenting RasGas with a beautifully illustrated antique edition of "Don Quixote" Book I and II. This prestigious gift printed in Barcelona in 1881 still has the original leather binder is on display in RasGas' head office representing the start of a



The *Maersk Ras Laffan* - delivering Endesa's first LNG cargo

long and fruitful relationship between RasGas and Endesa.

Endesa Generación is the leading electricity generating company in the Iberian Peninsula. It has a growing presence in the natural gas market segments in Spain and Portugal. It supplies 41.9 per cent of Spain's electrical power and has a 10 per cent market share of the Spanish natural gas market.

The agreement with RasGas and Endesa will strengthen Endesa's competitiveness in the Spanish and

Portuguese gas markets. This partnership will assist Endesa in achieving its target of 20 per cent of the Iberian market by 2008. RasGas views the Endesa SPA as being important to its own expansion plans especially as the Spanish demand for LNG continues to grow. RasGas is delighted to be in a partnership with this growing company and looks forward to a long and productive working relationship. ♦

By Sinéad Mangan-McHale

## Don Quixote in Summary

This classic and world-renowned novel "Don Quixote," was written by Spanish author Miguel Cervantes. It is considered his best work. Book 1 of the novel was published in 1605, when Cervantes was 58. Book 2 was published in 1615, just one year before his death.

It is the classic adventure of a madman: the "renowned Don Quixote de la Mancha." He attacks windmills, believes a peasant girl to be a lady, and fancies that he is a knight-errant, dedicated to righting wrongs and rescuing damsels in distress.



# Setting Sail

*The third LNG carrier chartered by RasGas, the Lusail was officially named by Mrs Gail Dodds, wife of RasGas Managing Director, Alex Dodds*

**W**orld class' was the appropriate theme at the most recent RasGas ship naming ceremony held in Korea in May 2005. The third in a growing fleet of LNG carriers chartered by RasGas, the *Lusail* was officially named by Mrs Gail Dodds, wife of RasGas Managing Director, Alex Dodds. In her speech, Mrs Dodds welcomed a 'world class' ship built at a 'world class' shipyard as she launched the *Lusail*. The *Lusail* is named after the area of Qatar already gaining fame with its new international motorcycle-racing track that in turn, has its own growing 'world class' reputation.

With an anticipated fleet of 26 tankers, RasGas is ensuring the safe and efficient delivery of LNG to its growing portfolio of ex-ship customers in the European and American markets.

Recognising the importance of the maritime tradition of naming a ship, senior representatives from RasGas including Alex Dodds, Managing Director, Nasser Al Naimi, Commercial and Shipping Manager and Abdulrahman Al Mulla, Deputy Site Manager, DSME, attended the naming ceremony at Samsung Heavy Industries (SHI) shipyard. Accompanying them were Nasser Al Romaihi, Chief Executive Officer, Qatar

Shipping Company (Q-Ship) and Mohammed Al Emadi, a senior representative from Qatar's embassy in Korea.

The practice of naming a ship dates back to the early fourteenth century when a ceremony was held to safeguard a new ship and its crew from the perils of the oceans. A senior female representative from the owners of the ship is normally asked to perform this prestigious task. In addition to formally announcing the ship's name, the sponsor bids the ship good wishes for her seagoing life. Gail Dodds, the new ship's sponsor proudly performed the time-honoured tradition

naming the *Lusail* and wishing her, her officers and crew "a fair wind and a following sea".

The *Lusail* is history in the making. It is not only the largest carrier chartered by RasGas with a 145,000 cubic metre capacity but is the largest LNG carrier constructed and delivered by Samsung Heavy Industries (SHI) to date. The *Lusail* is the third vessel delivered to RasGas by SHI. The other vessels are the *Fuwairit* and *Maersk Ras Laffan*, both with capacities of 138,000 cubic metres.

The increase in capacity of the *Lusail* signifies the pacesetting achievements of RasGas and its efforts to secure improved economies of scale and new customer bases.

*Lusail's* cargo containment system utilises the French GTT Mark III membrane system. Its four cargo tanks will carry LNG at a temperature of approximately -161 degrees Celsius. With her excellent insulation properties, she will minimise boil-off and therefore maximize LNG cargo deliveries to RasGas customers at a cruising speed of 19.5 knots. She will

complete a round trip to the Spanish port of Cartagena in 25 days and to Incheon in Korea in approximately 30 days.

With a growing international market and the long-term goal of delivering LNG to every corner of the world, RasGas has specific requirements of its LNG tankers. The design of the *Lusail* makes it compatible with all the major LNG loading and discharging terminals worldwide. During her 25-year charter period with RasGas, this design will be used to the advantage of the prestigious international RasGas customer base.

The *Lusail* is 29.4 per cent owned by Qatar Shipping Company (Q-Ship). Q-Ship is Qatar's largest ship owning and operating company. It is the first company in the Middle East to be fully certified in all three standards of quality management and systems, namely ISO 9001:2000, ISO 41001:1996 and OSHAS 18001:1999. *Lusail* is Q-Ship's sixth LNG vessel and will be joined by two more vessels by the year-end.

Japanese companies MOL, K-Line and Nippon Yusen Kaisha (NYK-Line) are the other consortium members owning the vessel. NYK is a Japanese company founded in 1885 and is one of the world's leading shipping companies with an excellent commercial reputation. NYK will operate the *Lusail* on behalf of RasGas.

The *Lusail* set sail from Korea on June 24th and arrived at the Ras Laffan port in Qatar on 12th July. Following loading with LNG, she commenced her first commercial voyage back to Korea on July 14th delivering an ex-ship spot sale to KOGAS. This first voyage was made possible by the dedication and hard work of RasGas' Operations Group who completed their shutdown ahead of schedule and thus ensured the cargo became available for sale. It demonstrates the strong working relationship and teamwork within all areas of RasGas, ensuring its reputation as a key player in the LNG industry. ♦



The *Lusail* received her maiden cargo of RasGas LNG on the 13th of July 2005



# Finding Forts

With the rise in Qatar's profile as a tourist destination, its name has become synonymous with fabulous sporting venues and events, sparkling warm seas, great shopping experiences and desert dune bashing. But for those who yearn for something just that bit different, and who want to feed their taste for the historic, a trip to the forts of Qatar is a must.

Spread out across the country, these forts offer a glimpse of a bygone time and the days when the tribes of the land needed to be constantly on the alert for invading armies. Qatar has quite an impressive number of forts and, although most people are readily able to name the much-visited forts of Al Koot and Al Zubara, these are just a couple of examples of the dozen or so heritage sites that the authorities are now renovating.

Al Koot Fort, in the centre of Doha near to Dhow Roundabout, was erected on a slight hill in what was once the outskirts of the old town of Doha. Built in 1880 during the reign of Sheikh Abdulla Bin Qassim Al Thani it is one of a number of such forts which were erected during the 19th century when the Turkish occupation troops were based in Qatar. It was restored in 1978 and set aside as a museum for the display of traditional and Bedouin crafts.

The structure of Al Koot, which has one rectangular and three circular towers, is very similar to one in the north of the country at Zubara, which was built in 1938 on the ruins of a walled fortress city. During the 1700s, Zubara was a flourishing trade centre and excavations show that the city covered a site of some 60 hectares: the city walls with the bases of twenty towers have now been uncovered and are the subject of an archaeological study. It is believed that many successive settlements were founded in the same area, each one on top of the



*Alkoot fort - Entrance*

ruins of the last. The fort and village of Zubara were destroyed in a siege in September 1878.

The fort located at Murwab, on the western coast of the country is one of the oldest forts in Qatar. It was built during the Abbasid period. The area is now characterised by limestone desert but it is believed that the land there was once quite fertile, with indications of a settlement of almost 250 houses distributed in the shape of an arch to the north of the fort. Excavations show that the Murwab Fort was built on top of the ruins of an even earlier fort which had been destroyed by fire.

Umm Slal Mohammed, located 20 kilometres north of Doha, is a great place to picnic and satisfy the historian in you. A natural oasis which led to the cultivation of the land in this region, it provides a beautiful area of greenery at the foot of the fortress, where visitors love to spend the day enjoying the beautiful palm tree groves and the traditional irrigation canals (aflaj). The fort was built by Sheikh Mohammed Bin Jassim during the late 19th and early 20th centuries. It has an imposing structure consisting of two tapered towers, a wall measuring 24 by 13 metres, a number of hanging



*Umm Slal Mohammed Fort, located 20 kilometres North of Doha*

terraces and a series of majilis (sitting rooms) at different levels. The walls are made of stone and mud bricks, covered with gypsum and the structure provided both civilian and military functions.

One of Qatar's most important watch towers is the Borj Barzan Fort, approximately one and a half kilometres west of Sheikh Mohammed's fortress. Built at the end of the 19th century, this rectangular building of stone and mud bricks was three storeys high with two towers and a huge terrace. The upper levels were accesses from an outside staircase and the structure had a dual civilian and military purpose, functioning as a watchtower and residence. Although most of the structure has been eroded, parts of the towers remain intact.

The Wajba Fort, located in close proximity to the Emir's present residence, the Wajba Palace, is another ruin that has recently been restored to its former glory.

Considered the country's oldest fort, it is distinguished by its high towers and its simple yet strong walls. Passing through its heavily fortified doors gives visitors a feeling of having entered another era. A winding staircase leads to the upper level where there is a clear view of the land for miles around. A small structure in one corner suggests a mosque; and a majilis close by supported by huge wooden pillars completes the picture.

Some of the many other forts and remains spread throughout the country include:

**Al Rekyat Fort**, located around 110 kilometres from Doha, was built between the 17th and 18th centuries. Made of rectangle mud and stone construction with four corner towers, it was restored in 1988.

**Al Thugh Fort** is in the north west of Qatar about 110 kilometres from Doha. Its rectangular shape with four towers typifies desert forts across the country.

**Ruwaidi Fort** is built on a site which shows evidence of habitation dating back to the 10th century. However, most artifacts found during excavations date from the 18th century only.

**Al Huwaila** on the east coast approximately 28 kilometres north of Al Khor was the principle town of Qatar prior to the rise of Al Zubara and Doha and is the site of a fort which was built during the early Islamic period.

The defensive positioning chosen for some coastal forts is exhibited to

perfection in the coral and mud-brick fort which guarded Khor Hassan, the base for the famous Rahman Bin Jabir. A skilled and accomplished sailor with a somewhat creative approach to seafaring, his varied and daring exploits made him one of the most notorious pirates in the region in the early 19th century. Not only did the Khor Hassan Fort provide him with a safe haven that dominated the village, it was also built at a point where there was only a narrow channel between two reefs giving access to the open sea. A second channel, west of Khor Hassan was only navigable during the high spring tides, giving it a superb defensive position. ♦



Al Zubara Fort

# RasGas

MAGAZINE

Issue No 12 • July • October 2005



Personal Achievement  
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