

# Yemen's Tourism Wealth

Excerpted from a speech by His Excellency  
Ali Abdullah Saleh, President, Republic of Yemen



H.E. Ali Abdullah Saleh

TOURISM IS CONSIDERED AN IMPORTANT resource and source of finances for Yemen, and we treat it as equally important as our fish wealth. This is even more important for us than oil, because our oil wealth could become exhausted one day, but the tourism and fish-wealth sectors of our economy will never be exhausted, and with good leadership, will enable our country to endure.

The Ministry of Culture and Tourism and our tourism agencies have the responsibility of implementing promotional programs that encourage tourism in Yemen and, just like oil and fish wealth, we

have to take care of our tourism wealth by promoting this activity. We must especially ensure that there are no obstacles that hinder this important sector of our economy. The government has adopted many measures to bolster tourism, including:

- Applying a widespread security-network strategy in the governorates and provinces
- Providing the proper atmosphere for tourism so that everyone involved shares the responsibility of making Yemen look better in the eyes of tourists

- Promoting our desert, beaches, new hotels, and other tourist-related amenities

As many tourists know, Yemen has a cultural and architectural diversity that dates back to prehistoric times. Our capital city, Sana'a, is considered the birth place of one of the ancient international civilizations and a living museum of history; it is home to some of the finest architectural art in the world. When we talk about Sana'a, we are talking about a city that is a source of great pride to every Yemeni and Arab citizen, and to anyone who is interested in humanitarian heritage and truly unique architectural construction.

Insofar as investments in our tourism sector are concerned, we wish to encourage tourist parks, centers, and hotels. The country is now in the second stage of the restoration and renewal of the historic Cairo Castle in Taiz, which will need facilities such as an open-air theater, different restaurants, a cultural museum, and a landmark that will show the inherited history of the Yemeni people and the engineering and architectural arts by which Yemen is distinguished. We would also like to repair and restore all the historic castles and forts throughout the country.

I would like to praise the Ministry of Culture and Tourism for initiating new interest in Yemen's culture and art, which led to having Sana'a named as the capital of Arab culture in 2004. We are optimistic that this important designation will continue to focus attention on Yemen as one of the world's showcase countries. ●



Among the reasons tourists find Yemen so appealing are beautiful architectural sights like these.



# 2005: Year of Tourism Promotion

By the Honorable Abdulkader Bagamal,  
Prime Minister, Republic of Yemen



Hon. Abdulkader  
Bagamal

YEMEN'S HIGHER Council for Tourism, of which I am chair, has designated the year 2005 to be the "Year of Tourism Promotion."

The Council has also established a task force headed by the Minister of Culture and Tourism, the Honorable Khaled Alruwais-

han. The task force also includes members from all agencies concerned with tourism, as well as representatives from the private sector, and will prepare draft resolutions to determine priorities for enhancing the country's tourism infrastructure and for

raising awareness among the public about the importance of tourism.

In addition, the Council established another task force, headed by the Deputy Prime Minister and Minister of Planning, the Honorable Ahmed Mohammed Sofan, to study the proposed plan and divide it into different sections, so that revisions can be made every three months. The Council decided to refer its draft constitution to the Cabinet for discussion and approval.

It is with great optimism that Yemen looks forward to continuing our work to expand opportunities for tourists who visit our country this year and in years to come.

The Higher Council of Tourism approved in January the Tourism Promotion Plan 2005, which is oriented to

ensure upgrades to the tourism infrastructure and improved tourist services.

The plan, endorsed in a meeting that I had moderated, authorizes the Tourism Promotion Council to draft a new tourism budget and requires a 50 percent state contribution to promotion funds.

The council took a number of measures aimed at dealing with situations detrimental to visitors, such as reducing fees for entry visas for tourists by 50 percent. The Sana'a International Airport and some land ports of entry will also be upgraded under the plan.

The council decided that tourism in Yemen must be portrayed in a new and spectacular way. ●

## Taking the Lead in Regional Reforms

By the Honorable Dr. Abubaker A. Alqirbi,  
Minister of Foreign Affairs



Hon. Abubaker Alqirbi

THE REGION OF THE broader Middle East and North Africa (BMENA) is now involved in steady efforts to encourage open and inclusive dialogue with its partners in the G8 countries, in order to advance the universal values of human dignity, democracy,

participation in civil society, economic opportunity, and social justice.

The call for partnership for progress and a common future in the BMENA region at the Sea Island G8 summit in June 2004 is gaining momentum, and a follow-up process has taken place from New York and Rome to Bahrain and Rabat. This led to the first Forum for the Future, convened on December 11, 2004, where regional participants agreed to expand their already-strong cooperation in support of the region's reform efforts.

Yemen has accumulated substantial experience in adopting political and economic reforms. The country has achieved

genuine results in establishing a representative, democratic political system, leading the way in the Middle East. From its establishment in May 1990, the Republic of Yemen has experienced successful parliamentary, presidential, and local government elections. More than 20 political parties operate in the country, with hundreds of NGOs and dozens of independent newspapers. Because of this democratic record, Yemen was chosen in Sea Island, together with Italy and Turkey, to design a "democracy assistance dialogue" aimed at providing venues to encourage the growing momentum for reforms in the region.

To that end, Yemen has expressed its intention to host – next June – the first joint meeting of willing governments and civil society organizations, and hopes to become the venue for the first regional center for democratic dialogue.

During the deliberations at Rabat, Yemen has presented a major initiative for small- and micro-enterprises development, Strategy and Plan of Action, which received the support of the forum and will be supported through the IFC financial

facility to create opportunities for regional entrepreneurs, especially women.

Yemen believes there is an urgent need for countries in the region to step forward and respond to homegrown aspirations for reforms, and to emerge as effective partners in the global economy. The call for democratization and liberalization should be part of our efforts to pursue a just and durable peace in the Middle East, through the implementation of the Road Map and the establishment of an independent Palestinian state.

In Rabat, Yemen expressed its commitment to democratic reforms and asked the international community to allocate financial resources for the initiatives raised by BMENA countries, such as illiteracy eradication, entrepreneurship and business training, microfinance enterprise development, and tourism initiatives. Yemen stressed the need to establish flexible mechanisms for dialogue, which will give participant countries the chance to share experiences and develop activities that will lead to a real regional partnership for democratic and political reforms. ●



# Yemen's Development Potential

By the Honorable Ahmed Mohammed Sofan,  
Deputy Prime Minister and Minister of Planning



Hon. Ahmed  
Mohammed Sofan

THE REPUBLIC OF Yemen sits at the southwestern tip of the Arabian Peninsula and Asia overlooking the Bab Al Mandab Strait that controls the entrance into the Red Sea. Yemen also enjoys a coastal strip spanning 2,500 kilometers on the Red Sea, the Gulf of Aden, the Arabian Sea, and the Indian Ocean, with vast fish wealth and marine life. The diversity of the landscape – ranging from highlands, lowlands, coasts, and desert – provides diverse climatic conditions and varying temperatures. Such features make Yemen a promising place for substantial investment prospects and a virgin land for many economic activities, including mineral exploration.

Moreover, the transformation into a market economy and the ongoing economic reforms have created conducive

conditions to investment. An investment law was issued in 1991 to create an institutional and legal infrastructure. The law is clear and transparent, leaving no room for any improvisation or disparity of treatment among competitive projects. It has also provided a set of incentives – financial and non-financial exemptions for investment projects. The investment law has made sure that potential investors get sufficient guarantees guarding them against nationalization, seizure of the project, imposition of project arrest, or freezing of project funds except through the judiciary system. Moreover, the Republic of Yemen has joined a number of regional and international investment guarantee institutions in a bid to strengthen mechanisms safeguarding investors' projects and legitimate rights against non-commercial risks. Other laws of strong relevance to the creation of an appropriate and attractive climate for investment have been issued such as the Law for Certified Accountants, Judicial Authority, Arbitration, Deliberations, Com-

mercial Registration, Land Registration, and the Commercial Companies Bill.

To improve the implementation of reforms, the government, through a broad participatory process, drafted a comprehensive and long-term vision, in addition to clear and specific policies, and committed to their implementation. Yemen's Strategic Vision 2025 aims at improving human development and raising standards of living for all Yemenis. Within this context, Strategic Vision 2025 has targeted upgrading Yemen to match the group of countries with mid-level human development, diversified economies, and comprehensive development.

To obtain this target, Yemen has to accelerate its economic development and increase its GDP growth to an annual average of 9 percent. This acceleration of growth should be accompanied by controllable population growth, leading to a situation where the Yemeni economy could achieve an annual per capita GDP growth of 2.5 percent in the first few years. ●

## Tourism and Terrorism

By Yahya M.A. Saleh, Chairman, The Association of Yemen  
Tourism and Travel Agencies (AYTTA)



Yahya Saleh

DEVELOPING TOURISM DEPENDS ON SECURITY and stability in the world. Many tourist destinations have suffered from crises due to terrorist acts or religious influences, which some gangs try to hide behind to justify their evil, and in effect, this harms their own people before hurting others.

Terrorism is based on extreme ideology, which excludes others and calls people to fight instead of building relationships of mutual respect. This heightens terrorism and increases its activities. Such cultural elements produce mentally, psychologically, and socially ill people, seeking to destroy everything before them.

Extreme ideology and black terrorism have resulted in a counter-extremist ideology in which each party seeks to destroy the other, replacing love with hatred. This threatens the world's stability and hurts the tourism industry in every country in the world.

To save the tourism industry, different groups of people have to be involved in a battle against terrorism. There has to be a cultural and educational campaign to educate people so they can welcome others and encourage peaceful and open contact with them. A tourism industry cannot be developed in a country where people do not welcome their guests, but Yemen always welcomes guests. ●

## The Onyx Valley

By Mahbub Ali,  
Middle East Representative, LEADERS Magazine



Mahbub Ali

NO MORE THAN 150 KILOMETERS FROM Sana'a, 2,700 meters above sea level in the Ans area of the Dhamar Governorate near Hammam Ali (one of the Yemen's most significant tourist resorts, famous for its warm mineral spring waters, and a place of relaxation and medical treatment for Arabs and foreigners), there is a valley rich with onyx that is being extracted from the deep interior of the surrounding mountains.

This area is known for its production of this glittering precious stone, a stone that captures the mind and heart, not unlike diamonds and gold. Yemeni onyx has a special irresistible charm and magic, and is distinguished by the various diversified colors it exhibits – from dark and light red to brown, and from ink blue to white.

The main market for onyx is at the Bab-al-Yemen bazaar in Sana'a. The number of customers from the Gulf States, Saudi Arabia, Iran, Iraq, and Jordan desirous to acquire it far exceeds that of Yemeni customers. It will be interesting to see if onyx becomes the next "mocha coffee" that carries the glory and reputation of Yemen to all markets of the world! ●



# Oil and Minerals: Full of Promise

An Interview with the Honorable  
Dr. Rasheed Saleh Baraba, Minister of Oil and Minerals

**EDITORS' NOTE** *With more than 20 years' experience in Yemen's oil and gas industries, Rasheed Saleh Baraba was appointed to his current post in April 2001. He previously served as deputy minister of oil and minerals. Baraba earned his Ph.D. in petroleum geology from the University of Moscow, and has published numerous technical articles and research papers.*



Hon. Dr. Rasheed Saleh Baraba

## What are the most important areas of investment in Yemen?

A quick look at the structure of the Yemeni economy and aspects of the country's development will show that there are numerous sectors that can attract capital to Yemen, but the most significant ones are the oil and gas sectors, the industrial sector, the agricultural sector, and the tourism sector.

## Could you elaborate more on investment in the oil sector?

As the oil sector is one of the most important sectors of the Yemeni economy, the state has paid special attention to it, particularly through encouraging and attracting local, Arab, and foreign capital for investment in this sector.

## What measures have been taken by the Ministry of Oil and Minerals to attract investors and introduce investment opportunities in this field?

The Ministry of Oil and Minerals has fostered a number of arrangements and procedures to introduce investment opportunities in the field of oil. The most important of those procedures are:

- Convening international conferences and contracting international companies to promote the open blocks
- Preparing the necessary geological and economic studies and information, and establishing a data bank to maintain and watch over all that pertains to petroleum operations in Yemen
- Dividing the petroleum map into blocks by conducting studies and issuing promotional brochures about them
- Meeting with oil companies and

convincing them to invest in the open blocks through the provision of the necessary information and studies on these blocks

- Forming committees to negotiate with companies that want to invest in this field, and deciding upon conditions that best serve the interests of Yemen and those companies

## What is your outlook for future investment in Yemen?

I think that because of the unified state and the dissemination of the atmosphere of freedom, democracy, party pluralism, and free-market activity – in addition to a flexible investment law – and because of the power of order, law, and stability, the future of investment in Yemen now looks more promising than ever. Yemen is still a virgin country with extensive tourism resources and a historical heritage that remains unexploited. There are huge treasures that have not yet been explored.

## What are the most significant investment opportunities available in Yemeni oil and gas?

There are many attractive investment opportunities in the fields of oil, gas, and minerals. The most prominent of these are oil exploration in the promising open blocks onshore and offshore, the oil-and-gas-based petrochemical industry, and the exploitation of mineral resources in economically feasible quantities.

## What has been the most important oil-exploration activity in Yemen?

Oil-exploration work in Yemen goes back to the '30s – more precisely, to 1938, when the Iraq Petroleum Company carried out seismic surveys in some areas of

Yemen. This was followed by intermittent surveys by other foreign companies at the outset of the '50s and '60s, which continued during the '70s and '80s, and resulted in the following:

- In 1984, the American Hunt Oil Company announced the first commercial exploration of oil in Yemen, in block 18 in Mareb/Al-Jawf. The development process commenced with the erection of surface facilities and the construction of a pipeline to the Red Sea.

- In 1989, oil was discovered by the Soviet company Technoexport Ltd. in three oilfields in Shabwa governorate, namely West Eyad, East Eyad, and Amal, block 4. Surface facilities were erected and an export pipeline was constructed to Belhaf on the Arabian Sea.

- In 1991, commercial exploration was realized at Sona oilfield, block 14, Al-Masila, by Canadian Occidental Petroleum Co. [Canadian Nexen Inc.], which was followed by a number of other discoveries. Surface facilities were erected and an export pipeline was constructed at Al-Dhabba Area, Hadhramout governorate, on the Arabian Sea.

- In September 1996, oil was discovered at Hilaiwah oilfield, Jennah block 5, by a consortium of oil companies

operating in the block. Surface facilities were erected and production in this block was connected by a pipeline extending to the concession area of Hunt Oil Company in Mareb/Al-Jawf sector. Export of production from this oilfield takes place through the pipeline Yemen-Hunt Co., which extends to the Red Sea.

- In 1998, oil was discovered at Kharir, Atoof, and Wadi Tarba [block 10, East Shabwa] oilfields by Total Yemen [Total Fina Elf] and production in this block was connected to block 14 at Al-Masila.

- On December 18, 1999, the Nor-





wegian DNP Co., operating in Hawareem, block 32, announced the discovery of oil. Production and exportation through the Al-Masila pipeline commenced in November 2001.

- The British company Dove Energy announced commercial production from block 53, Easr Saar on December 20, 2001. Pumping, production, and exportation through the Al-Masila pipeline began at the beginning of 2002.

- On October 14, 2003, the American company Vintage Petroleum announced commercial production from block S-1 at Damis. Production and exportation is expected via the Jennah pipeline during the first quarter of 2005.

- On December 17, 2003, Canadian Nexen Inc. announced commercial production from block 51 East Hagr. Production and exportation is expected via the Al-Masila/Al-Shihr pipeline during the first quarter of 2005.

### **Can you identify distinct phases in the development of Yemen's oil industry?**

Yemen's oil industry has passed through four phases that differ from each other with regard to their qualities, type, and the intensity of work involved, and also in the level of state institutions involved, their structural setups, technical administrations, and available capabilities.

The first phase, extending from the end of the '30s until the beginning of the '60s, represents a primitive phase, characterized by the absence of the basic conditions for any economic activity. At that time, Yemen was divided into two parts, the south, under the rule of the British, and the north, under the rule of the Imam. Economic activities were primitive and disorganized, and there was a complete absence of infrastructure.

In this context, geological information trips were undertaken by Western specialists representing various companies. The objective of those trips was to identify the general features of the surface geology of Yemen and the different sedimentary layers. Some of those geologists produced descriptions of the sediments in some eastern parts of the republic, and even gave them names. The significance of this phase lies in the fact that it represented the first step to acquaint Western international companies with the general and physical nature of the geology of Yemen.

The second phase of development ran from 1960 to 1990. At the outset of the '60s, through communication between these various scientific missions, the first geological map for the eastern parts of Yemen was developed. Sedimentary layers were divided and described and their ages were identi-

fied. That represented the first stratigraphic column of sediments. The late Lebanese geologist Ziyad Baidhoun was the first person to describe the geology of Yemen in a scientific and organized manner – particularly the Hadhramout and Al-Mahara areas, which form an important region within the geography of Yemen – and his work represents a scientific reference to this day.

In the '60s a number of international oil companies entered Yemen to explore for oil in North Hadhramout/Al-Mahara and the Red Sea area. They implemented some geophysical surveys and drilled a number of exploration wells. The American Mecom and Pan American Oil compa-



nies were pioneers in the field. They were the first international companies to engage in this sphere. Mecom drilled five exploration wells in the area to the south of the Red Sea. Pan American drilled six wells and discovered the first deposits of hydrocarbons at Tarfit Well-1, North Hadhramout.

Also in the '60s, some international companies entered Yemen and engaged in business partnerships with Yemeni companies. Among the most important of those companies were the Soviet company Technoexport Ltd. and the Italian company Agip, which undertook an advanced exploration program in the marine Mukalia/Saihout area, which involved surveying 12,000 kilometers of seismic line and drilling nine exploration wells offshore. The first oil well was established in that area: Sharma 1, producing 3,500 barrels per day.

From the social and economic point of view, that phase represented a transition period in the history of Yemen which could be described as a period of struggle for dominance, after the transfer of authority from the British and Imamate to young Yemeni governments. The political unrest was a negative factor, which did not encourage economic activity in any industrial sector, including the oil sector.

By the end of the first phase, Yemen had become known in international economic circles as a virgin country situated

in the vicinity of the main sources of oil in the Middle East. Social and economic conditions started to become much better than they had previously been. There were indicators for political stability, particularly in northern Yemen.

All these conditions encouraged a number of international oil companies, such as the American Hunt Oil Company, the French companies Total and Elf, Canadian Nexen Inc., and others to procure numerous concessions in Yemen. What characterizes this phase is the discoveries of oil in commercial quantities in the Al-Sabatain reservoirs in the Mareb/Shabwa sector. Geological understanding of the sediments of Yemen was promoted as a result of regional surveys, carried out by several companies in the form of integrated projects throughout the entire country. For the first time, sedimentary reservoirs were divided according to their physical geography and their geological ages, and sedimentary and structural properties were identified.

At the exploration level, geological and geophysical surveys were implemented in various areas, and a large number of exploration wells were drilled. This development was accompanied by the promotion of the structures, the activity of national oil institutions, and the creation of a national cadre. For the first time, the oil industry emerged in Yemen in a new form and style. Oil production in Yemen during this period ranged between 7,254 and 189,179 barrels per day.

What characterizes this phase from the political and economic point of view is the appearance of the Yemeni state in its modern form in the north, and the tranquil conditions that assisted in the growth of different economic sectors. Universities and scientific institutions were erected, the number of people in the national cadre increased, and the living standard of the Yemeni people improved. However, in southern Yemen, a struggle for power and authority in 1986 led to an increase in economic and political difficulties, which affected stability in the south until the emergence of the unified state of Yemen in 1990.

### **What about the third and fourth phases of development?**

The third phase ran from 1991 to 1994. The emergence of the Yemeni state significantly encouraged international investments in the various economic sectors. The oil sector drew the attention of the world. Many international companies pounced upon oil-exploration concessions. Giant oil companies, such as Exxon,

Chevron, BP, Shell, and others, entered Yemen for the first time with intensive exploration programs.

The geographical area was also divided into concession blocks in a scientific manner. At an institutional level, the Petroleum Exploration and Production Authority was formed as a technical organ to supervise the various activities in the fields of exploration and production.

At a legal level, production-sharing agreements were developed, and their financial terms and conditions were improved to become in line with similar agreements in the United States.

This phase is characterized by the following elements:

- Stability, represented by the emergence of the unified state
- Exploration of oil in four other blocks
- An intensity of exploration work
- An increase in the number of companies
- The promotion of infrastructure in Yemen
- The development of an institutional structure
- An increase in the number of people in the cadre
- The construction of a petroleum database
- The adoption of new policies to match the policies that prevail in the international oil industry

We are still in the fourth phase, which began in 1995. Despite the abortive secession attempt that threw the country into a bloody war in defense of unity, the unified state prevailed. Political and economic conditions were brought back to normal, and difficulties emanating from that war were overcome in a respectable period of time. The number of oil companies in Yemen continued to increase, and oil and gas explorations advanced significantly.

This phase is characterized by the following elements:

- The re-division of the oil-blocks map in accordance with scientific principles
- Improving financial terms and conditions of the production-sharing agreements
- The development of the concept of the geology of Yemen through consideration of geological samples of sedimentary reservoirs
- The reformation of economic policies
- The signing of more than 25 production-sharing agreements
- The entry of 14 international oil companies engaging in 25 blocks
- The drilling of 1,355 wells, 377 of which are exploration wells and 1,068 of which are development wells
- The conducting of 167,880 kilometers of seismic surveys, out of which 4,955 kilometers are three-dimensional surveys
- The announcement of discoveries

of oil and gas in commercial quantities in six blocks

- Production from five blocks: block 5 [Jannah Hunt]; block 10 [Total]; block 32 [DNO]; block 53 [Dove]; and block S1 [Vintage]

#### **What about refining activity and the petrochemical industry in Yemen?**

Yemen has two refineries for crude oil. The first is the Aden Refinery, which was established by BP in 1952 and was completed in 1954, with a production capacity of 170,000 barrels per day, which is equivalent to 8.5 million metric tons per year. The ownership of the refinery devolved to Yemen on May 1, 1977. The refinery's products are benzene, diesel, gas oil, and kerosene.

The second is the Mareb Refinery, which was established in 1986 with a production capacity of 10,000 barrels per day. Its supply of crude oil comes from block 18, Mareb/Al-Jawf. Its operation was undertaken by Hunt Oil Company until 1995, when the company's agreement came to an end. However, the company continued operating it until the beginning of 1999, when its operation was transferred to Yemeni Oil Refineries Company. The products of the refinery are benzene, diesel, and gas oil.

There are plans to erect two new refineries. The first of these is the Al-Dhabba Refinery Project in the Hadhramout governorate, with a primary production capacity of 50,000 barrels per day. The project is located at Al-Shihr, northeast of the Al-Dhabba area, and it will be executed by Hadhramout Refinery Company. The second new refinery is the Ras Issa Refinery Project in the Hudeida governorate, with a primary production capacity of 45,000 barrels per day. The project is located at Ras Issa.

There are a number of other investment projects in this field, such as the establishment of a hydrogen distillation unit at the Aden Refinery, a study of the azote fertilizers industry, a study of the detergents industry, the upgrading of the Aden Refinery, and the expansion of and upgrades to the Mareb Refinery.

#### **What about exploration in the field of natural gas? What are the most significant investment opportunities in that area?**

Exploration for natural gas in Yemen started at the same time as the discovery of oil in 1984 at block 18, Mareb/Al-Jawf. With the continuation of exploration operations in numerous blocks, and expansion in developing oilfields, capacities in the sphere of energy were enhanced through the increase of oil and gas stocks and reserves in numerous

blocks in the republic. The stocks of gas are estimated at 43 million tons. The quantity liable to extraction from such reserves of liquefied gas, to the end of 2002, as per present efficiency coefficients, is about 18 million metric tons.

Due to the significance of gas and its role in the development of the national economy – in the development of local industries, household use, and securing financial resources for economic and social development in Yemen – the government has exerted, and is still exerting, continuous efforts to promote the gas sector.

The discovery of ample reserves of gas has led to a considerable increase in its exploitation. The Ministry of Oil and Minerals encourages investment in this field, through the erection of production facilities for liquefied natural gas [LNG] and the provision of means of transportation and other necessary inputs, with the aim that liquefied petroleum gas [LPG] will replace other traditional sources of energy, such as wood, petrol, and kerosene in some areas.

For the ideal exploitation of the huge reserves of natural gas, an agreement was signed in 1997 for implementing a natural-

gas liquefaction and export project, in which the ministry, represented by Yemen Gas Company, shall contribute 23 percent. This project, which is the largest to be implemented in Yemen, will contribute a considerable amount to the national economy, if executed.

In addition to this project, there are other numerous investment opportunities in the field of natural gas, such as:

- The exploitation of natural gas locally as a fuel for factories, for transportation, and for electric-power generation;
- The exploitation of natural gas to replace LPG as a fuel for household cooking and heating, especially in planned and organized towns. The LPG would then be directed to villages and remote areas for use as a household fuel and for lighting, replacing wood and kerosene;
- The exploitation of natural gas as a raw material in the petrochemical and fertilizers industries;
- Promoting the infrastructure necessary for a number of industries that rely on gas as a fuel, through the erection of a natural-gas pipeline network in the republic.

Without a doubt, growth in the use of natural gas as an alternative to other fuels will significantly benefit the environment. Therefore, developing this field is a great investment in the interests of the community. It will drastically reduce the environmental-pollution rate, which will reflect positively on the health of individuals and the community at large. ●





# Oil and Gas in Yemen

By Nabil Saleh Al-Gawsi, Chairman,  
Petroleum Exploration Production Authority (PEPA), Sana'a

**INTRODUCTION** Yemen is located in the southwestern part of the Arabian Peninsula. Historically, Yemen boasts one of the world's oldest civilizations, as depicted by the outstanding remnants of the Kingdom of Sheba, the incredible dam of ancient Marib, the Tawilan historical water cisterns in Aden, and the splendid skyscrapers of Shibam Hadramout. All of these, and other historical landmarks, reveal the distinguished role Yemen played as an important bridge of trade between East and West, for which it earned the mythical name, Arabia Felix.

Diverse physiographic features define Yemen as a land of splendid natural beauty – rugged deserts, soaring mountains, and seemingly endless coastlines. Yemen's trades vary too, from the fishermen plying their vessels along the coasts to the tribesmen cultivating their crops along the magnificent terrace mountainsides; from villagers following the most ancient of traditions to modern city dwellers enjoying the latest facilities advanced by technology.

All in all, Yemen is very much a developing nation with a unique past, a promising present, and an ambitious future. The discovery, development, and production of Yemen's oil, gas, and other mineral resources are enhanced by the accomplishment of gigantic projects like the Yemen LNG Project, the Aden Free Zone, and the associated Industrial Development Zone. All of these form an integral chapter in the continuing story of Yemen's glorious past and its ambitious future.

## Exploration Activities in Yemen

Throughout its geological history, Yemen has been an integral part of the Arabian shield. The accumulated information forwarded by the geological studies of the Arabian Peninsula from the 19th century onward shed more light on the various aspects that prove the intimate relationship between the prevalent geological structures, their common origin, and characteristics. Needless to say, the abundant reserves of oil and gas in different parts of the Arabian Peninsula encourage thinking about their origination in Yemen.



Nabil Saleh Al-Gawsi (left) and the Honorable Dr. Rasheed S. Baraba, Minister of Oil and Minerals

Today, there are continued efforts sponsored by the Ministry of Oil and Minerals to trace and evaluate the geological events that led to the creation of oil-producing regions in Yemen.

Current exploration activities in Yemen have resulted in the discovery of considerable reserves of oil and gas and, in a way, have provided additional verification of the fact that Yemen's sedimentary basins are promising and represent remarkable opportunities for investment in this field. Yemen's geographical extension over a wide area – both onshore and offshore – provides an additional dimension to its economic potential.

The discovery of major oil reserves in Yemen's Marib-Shabwah basin by the Hunt Oil Company in the mid '80s, and the striking discovery in Masilah by Canadian Occidental (now Canadian Nexen), made realistic the promising hydrocarbon potential in this country and, in a way, have forced explorers to rethink their ideas about this region's petroleum geology. It has raised the question: Are there any more oil-rich areas still to be discovered in Yemen? It is worth mentioning that the petroleum concession activity map covers 415,426 kilometers, divided

into 84 blocks, which constitutes about 80 percent of the land mass of Yemen.

The present status of oil-exploration activities led to the following developments: seven oil-producing blocks, two supplementary producing blocks (under development), proven gas reserves in three blocks, and initial oil discoveries in the Gulf of Aden (Sharmah) and in many blocks in Hadramout (north) and Hawarim.

Recent work has shown that Yemen's remising sedimentary basins owe their existence to the breakup of the Gondwana supercontinent, which began about 150 million years ago at a time when Arabia was still connected to Africa. In the Red Sea and Gulf of Aden, oil and gas deposits have also been found, although none of these are of commercial size. However, studies of plate tectonics in this region, sponsored by Petroleum Exploration and Production Authority (PEPA) in collaboration with international oil companies (IOCs), would unravel the ambiguity of the tectonic events and the results could guide explorers to new reserves.

## Petroleum Exploration and Production Authority (PEPA)

PEPA is considered one of the major units

of the Ministry of Oil and Minerals, under the direct supervision of the minister. The main tasks of PEPA are centered on the supervision of working IOCs in the exploration and production fields. On this basis, PEPA carries out its tasks through a specialized technical team working within its departmental framework. It also implements and carries out follow-up programs to check the performance of international oil and exploration companies working in the country, including receiving, collecting, and filing different information about the technical activities of the exploration and production stages; participating in the preparation and evaluation of the geological and geophysical studies and geochemical analyses of the sedimentary basins in the country, as well as the preparation of economic and technical studies for oil and gas reserves; continually supervising the strict adherence to the rules and regulations of the environment in collaboration with the concerned parties; and supervising the operations of international oil companies working in the oil-producing concessions in the country. ●

# International Companies Compete to Operate Oil Blocks

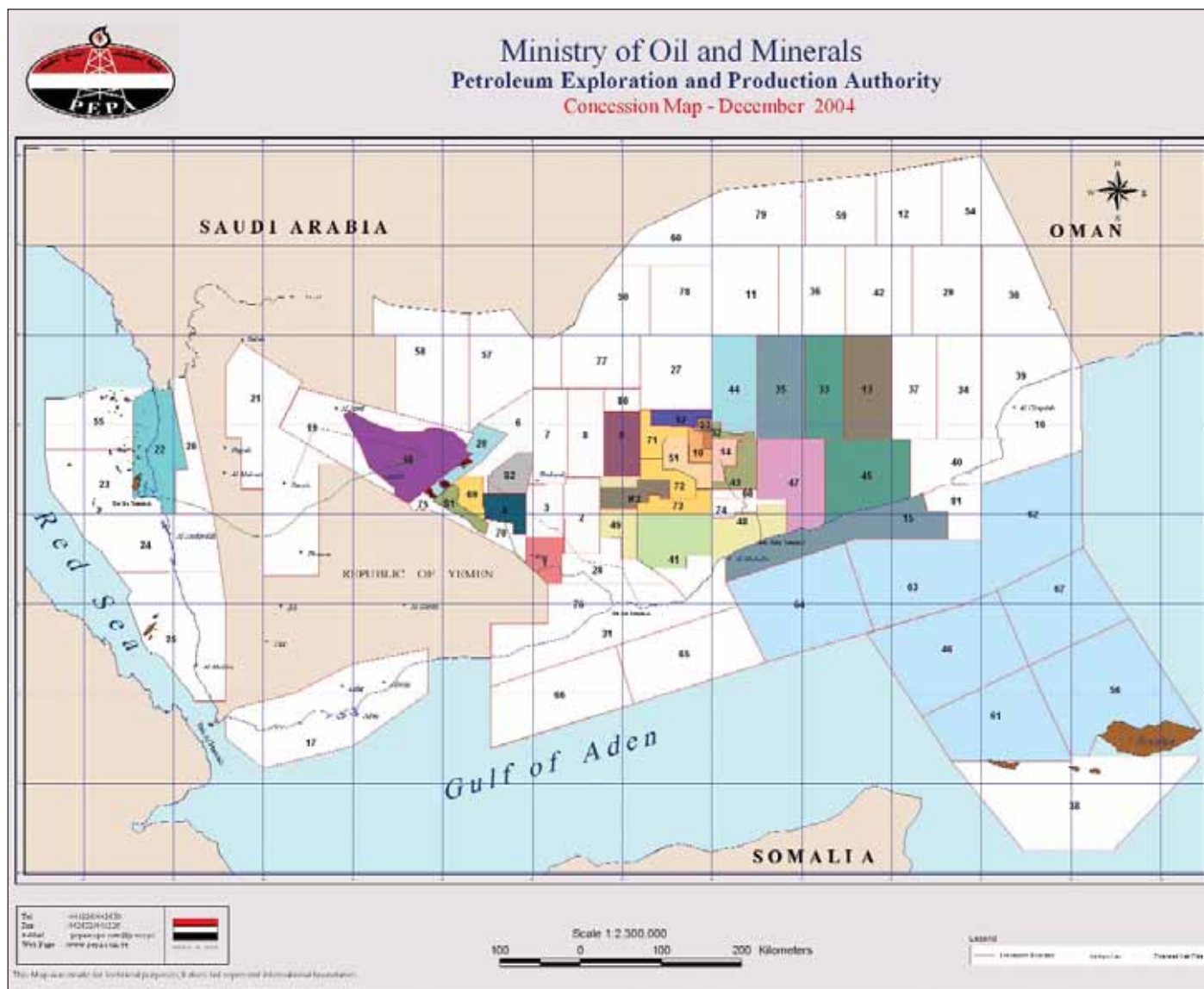
*An interview with Nabil Saleh Al-Gawsi, Chairman, PEPA, conducted by Abdulqawi Al-Odeini, Director, Department of Information, Ministry of Oil and Minerals*

THE PETROLEUM SECTOR AND THE current explorations in Yemen are in a boom. Work in this aspect has been ongoing through the implementation of a well-researched and transparent plan. Petroleum explorations in several blocks have started unveiling their richness in many areas of Yemen, and other fields are going through further extensive technical inspections.

Amid all of this, the Ministry of Oil and Minerals, represented by the Petroleum Exploration and Production Authority (PEPA), is implementing an ambitious program with a number of oil exploration

and production companies. After the tremendous success that followed the government's worldwide campaigning, dozens of foreign and Arab companies are currently competing to win bids to invest in the blocks still open for international tender offers.

This battle for development and construction is led by President Ali Abdullah Saleh and is carried out by the Yemeni government. The oil and mineral sector will lead the way in the comprehensive economic development that Yemen has committed itself to achieve. This is done with the understanding that oil will maintain its





position as the main source of income for the country and provides the hope that drives overall development in Yemen.

In this interview, Nabil Saleh Al-Gawsi, chairman of PEPA, points out the successes achieved in the Masila and Shabwa oil basins and the positive results so far unveiled concerning exploration works in various oil blocks. Al-Gawsi details the conditions of the blocks that have been re-divided in the areas of blocks S1 and 51. He presents the stages of the first and largest international tender of its kind in exploring oil and gas in

## oil explorations in the Masila and Shabwa basins?

Allow me to first start with the 2003 commercial oil explorations in Damis block S1, by Vintage Petroleum Yemen, and in Sharq Al-Hajar block 51, by Canadian Nexen Petroleum Limited. In this respect, I would like to inform you that the accumulation of scientific data gathered, and its analysis, has indeed participated greatly in bringing new visions that proved to be successful in the latest exploration activities, which have consequently resulted in greater interest from international oil companies in investing in Yemen.

The discovery of oil in commercial quantities in block 51, operated by Canadian Nexen Petroleum Limited, is a good example. It is worthwhile to mention that construction work on the central processing facilities [CPF], including the 22-kilometer pipeline to connect the Al-Masila Al-Shihr main pipeline, is currently ongoing. The official inauguration of production

block S1 was transported to Jannah block 5, signaling the expected production of the block by the first quarter of 2005 with a capacity of 25,000 barrels per day.

As for oil explorations under inspection for block 9, operated by Calvalley Petroleum Incorporation, and block S2, operated by Preussag Energy GMBH, I would like to note that block 9 of Calvalley is undergoing explorations in three stages. Work started with inspecting the first well, Ruwaidhat 1, and the initial results were 614 barrels per day. Work will continue by inspecting wells that were drilled in 2003. An assessment program will also be implemented in the form of drilling new wells to identify the extensions of the layers with oil and gas, in preparation to announce the commercial discovery of oil in this block.

As for block S2, I am glad to say that the German company Preussag Energy GMBH was able to discover a well, Nilm 1, in this block, and initial tests have shown the successful production of 450 barrels per day. This is beside the oil well Kharwa 1, discovered before with a production capacity of 500 barrels per day. The assessment and development work plan



Yemen, and talks about the companies that presented their bids and that were qualified before the announcement of the final result.

Al-Gawsi mentions the stages of international campaigning for some oil blocks on the Internet, in cooperation with the Schlumberger International Network. He specifies the future vision of the Ministry of Oil and Minerals and that of PEPA concerning the blocks of the southern and mid areas of the Empty Quarter. Al-Gawsi also stresses the fact that under the leadership of Minister of Oil and Minerals Dr. Rasheed S. Baraba, the valuable and important oil sector in Yemen is indeed in safe and loyal hands.

## What is the latest news about

in this area will take place in 2005, with an initial production capacity of 20,000 to 25,000 barrels per day. We are currently assessing the petroleum-production capabilities of the Basheer Al-Khair fields.

As for the oil discovered in block S1, operated by Vintage Petroleum Yemen, commercially announced on October 14, 2003, work is ongoing to construct its CPF, which will have a capacity of 10,000 barrels per day. Furthermore, a 28-kilometer pipeline, eight inches in diameter and with a maximum capacity of 80,000 barrels per day, will be connected to Hunt Oil Company's Jannah block 5 pipeline in preparation for production. On the other hand, recently, a certain quantity of oil produced in

will also be studied for this block by the German company, in preparation to announce the commercial discovery of oil in this block.

## New discoveries

### Have there been any new oil discoveries that you can highlight?

There have been initial discoveries of oil in block 49, east of Shabwa, operated by MOL Yemen Oil and Gas Company; along with block 43, south Hawareem, operated by DNO, ASA Yemen. Furthermore, information obtained by analysis of well recordings has unveiled layers of oil in a well south of Behark in block 49. Test procedures for the well have already started and unveiled the existence of oil in



three secondary layers. Later, the production capacity of these layers will be identified after the completion of the testing operation and assessments currently taking place at the well.

There have also been positive results for Al-Nabruga well at block 43 in Al-Masila. The results of drilling here revealed significant oil indicators, and well recordings have confirmed the existence of a 13-meter-thick section of the Qishn layer saturated with oil. This is apart from a section in the Al-Harshiyat layer. In fact, the Al-Nabruga well was recently examined and results revealed an oil-production rate of 2,670 barrels per day.

#### **What about promising oil blocks?**

There are promising blocks that indicate the existence of oil in them – including blocks 15, 47, and 48 – as has been unveiled through exploration drillings at those blocks. Meanwhile, component maps are currently being assessed and new areas are being investigated in a more specific manner, to locate potential oil fields for exploration in these areas, to begin after carrying out more assessments.

The Ministry of Oil and Minerals rep-

resented by PEPA has re-divided the area including blocks S1 and 51 into six new blocks as follows: three blocks were divided in block 51, and those are 71, 72, and 73; two blocks were divided in block S1, and those are 70 and 69; and one block was formed from block 48, and that is block 74.

#### **A modern campaigning plan**

**You have launched an international bid tender for exploration of gas and oil in Yemen. What are the specifications and objectives of this initiative?**

Upon instructions from Minister of Oil and Minerals Dr. Rasheed S. Baraba, the ministry, represented by PEPA, started a modern international campaigning plan to market the blocks that have been re-divided in blocks 51 and S1. These blocks – namely 69, 70, 71, 72, 73, and 74 – have been announced in local, regional, and specialized international newspapers and have received the greatest of interest by several international oil companies. We have done this to attract international investment in oil blocks in the country and to open a new window to petroleum

investments for the most prestigious oil companies in the world, which, if selected, could have their investments in Yemen.

This plan has specified the means to provide bids along with the major conditions for tender offers. Those offers were provided from January to March 2004, after which the companies that qualified – financially and technically – were allowed to participate in the tender. This also comes as an implementation of orders from President Ali Abdullah Saleh, who has always given great attention to the oil-production sector and its overall development in Yemen.

The tender has gone through several stages as follows: A committee was formed by the minister of oil and minerals to be under his direct supervision. Then the announcement to open the way for bids was published in major Yemeni newspapers and magazines – *Yemen Times*, *Yemen Observer*, 26 September, and *Oil and Minerals* magazine – and international newspapers – London-based *Al-Hayat*, UAE's *Al-Ittibad*, *Upstream*, and *MEES*. The announcement was intended to allow companies to offer



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their bids to invest in the six new blocks. The announcement was also published on the Internet.

The announcement mentioned the following conditions to accepting bids by oil companies willing to operate the mentioned six blocks: the company's profile, the company's technical and financial reports for the last two years, and the company's latest audit report. The final deadline to receive bids by the oil companies was March 15, 2004.

An operation room was prepared to work around the clock to receive the bids of the applying companies and answer any of their inquiries. A special data room was also prepared, and was equipped with the most highly developed and modern equipment. The period from March 27 to April 28, 2004, was specified to study and inspect the provided bids and identify the ones that qualified.

Twenty-eight international companies from 15 countries applied for the tender, but not all of them were allowed. Letters were sent to companies that did not fulfill the requirements and they were requested to complete their files by the deadline specified.

After the completion of all required data and statistics of the applying companies, the companies were evaluated using the most modern statistical procedures and taking into account the international standards applied in the field of oil industries. Upon the completion of the evaluation of the applying companies, 19 oil companies from 12 countries qualified for the tender. Nine companies were rejected from the tender for either not fulfilling the conditions mentioned in the original announcement or not meeting satisfactory financial or technical requirements necessary to apply.

After the Minister of Oil and Minerals approved the results of the first phase, which ended on March 26, 2004, letters were sent to qualified companies to view the data collected by the data room during the period March 27 to April 28, 2004. The third phase took place between May 2 and May 23, 2004. The final day to receive final bids by the qualified companies was May

23, 2004. All bids were submitted in the form of envelopes sealed with red wax. All bids were analyzed with scrutiny and studied by the negotiating team, and then raised to the minister.

This whole operation was the first of its kind by the Ministry of Oil and Minerals, and it represents the degree of transparency expected in international bid tenders. Due to this step, the ministry received several requests to negotiate investment opportunities to explore oil from international and Gulf-based companies that wanted to operate blocks that are not yet declared. For example, some have applied to operate blocks 6, 7, 3, and 17. Twenty-nine companies have applied for the exclusive rights to explore oil and gas in the six announced blocks, and this is a mere example of the transparency and accuracy of the steps taken by PEPA to this extent.



This has also been made possible due to the many oil discoveries in blocks 51 and S1, and initial oil discoveries in blocks S2, 49, 43, and 9, which were unleashed in 2003 and 2004. Such positive outcomes resulted from the joint efforts of PEPA and oil companies currently operating in Yemen, amid direct supervision and follow-up by Minister Baraba. This was also

possible through direct campaigning on the Internet.

**What are your activities to promote blocks 16, 19, 28, and 55?**

Apart from what the ministry and PEPA are doing in promotion, PEPA, in cooperation with Schlumberger International, is campaigning for the open blocks in land and water 16, 19, 28, and 55 on the Internet, through a Web site of PEPA's IndigoPool.com. Launching a Web site for PEPA on the network itself has many advantages, including opening a petroleum window to Yemen; receiving the largest volume of information related to the oil industry in the international market quickly, smoothly, and efficiently; ideal promotion through a common database supported by advertising and modern and developed scientific approaches; bringing more investing oil companies and visitors to the database to know more about the oil industry in Yemen, fields of investment, and open blocks; and the ease of promoting and conveying available information.

**A Strategic Project**

**What is the future vision of the ministry and PEPA concerning the Empty Quarter and Middle Region?**

The ministry and PEPA will continue a similar approach in future plans, especially after the success of the first phase in promoting open blocks. The second phase will be the promotion for the Empty Quarter and Middle Region. There is already a comprehensive strategic project prepared by the exploration department of PEPA based on instructions from the minister of oil and minerals. The project was prepared based on a scientific explorative vision that was well researched and based on specialized and available information.

The ministry, represented by PEPA, is adopting ambitious plans through which we hope to achieve all our programs and future plans, especially after the great success achieved by PEPA in the last few years in the field of explorations, and PEPA's attraction of several international oil companies through its events and promotional activities. ●

# Yemen LNG's Project for a New Era

By Jean-François Daganaud,  
General Manager, Yemen LNG Company, Sana'a

**EDITORS' NOTE** Jean-François Daganaud joined Yemen LNG Company as general manager in 1993. An engineering and business school graduate, he began his career with Elf Aquitaine in 1974, working in the company's exploration and production division in France, Iraq, Gabon, Yemen, and Congo. He also served as the company's country manager for Yemen and Congo, and as managing director of Elf Petroleum Azerbaijan. Following the TotalFina and Elf Aquitaine merger, he became vice president of business development for Asia in the gas and power division.



Jean-François Daganaud

Yemen LNG intends to market 6.2 MTPA [million tons per annum] of LNG [liquefied natural gas] from its future plant in Yemen, with the first LNG deliveries beginning in 2008. The project is programmed to launch as soon as an "anchor buyer" is secured, since all engineering studies have already been performed. The company is now prospecting actively in the new, emerging

LNG markets: Korea, China, India, and the United States, while remaining open to opportunities that can be seized elsewhere. The shareholders of Yemen LNG are France's Total S.A., with 42.9 percent; the state-owned Yemen Gas Company [YGC] with 23.1 percent; the U.S. independent, Hunt, with 18 percent; and Korea's SK Corporation and Hyundai Corporation with 10 and 6 percent, respectively. Additionally, Hunt

and SK are partners in the Marib fields, from which the gas will be extracted, and where Hunt is joint operator.

Yemen LNG with an investment – excluding ships – in excess of \$2 billion, is the largest projected investor in Yemen. Not only is it active in the government's development policy, but the company will also shape the future and will certainly provide positive spillover effects for the general Yemeni community and industry. For all gas-producing countries, the liquefaction of gas for export is the best way to valorize big gas resources where there is no gas market in the vicinity.

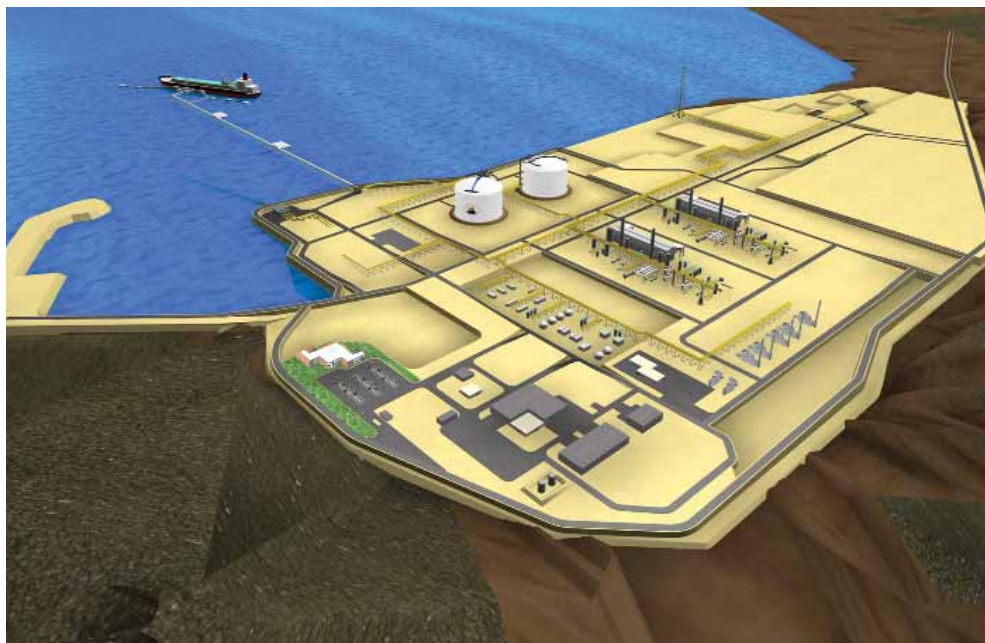
## A Well-Defined Project

The well-defined Yemen LNG project is integrated from upstream to downstream: from gas production to LNG export activities. Gas reserves of the Marib area fields are sufficient to produce 6.2 MTPA of LNG over more than 25 years. Gas production and processing facilities are already in place. Gas is produced along with oil through 360 active wells. Produced gas is collected and treated through two main gas-processing centers to extract LPG [liquefied petroleum gas] for Yemen Gas Company, and the resulting dry gas is re-injected into the reservoirs. The gas will be brought from Marib fields through a 320-kilometer pipeline to the liquefaction plant to be located at Bal-Haf, along the coast, 100 miles west of Mukalla. The shareholders are looking for a reliable LNG plant using proven technology. The LNG plant to be built and operated by Yemen LNG will be designed with two trains and a total LNG production capacity of 6.2 MTPA. A two-tank storage facility and a dedicated terminal with customary harbor services would be built near the LNG plant. The terminal has been carefully planned in an exceptional site that does not raise environmental concerns, and produces the lowest impact on the coastline and geotechnical risks possible, as well as the lowest downtime due to winds. The terminal also receives natural protection against the main eastern waves of the winter monsoons and has a deep harbor. With access to existing production facilities and to an exceptional port site, Yemen LNG thus benefits from competitive technical advantages.

## Sustainable Development and Environmental Protection

Yemen has a historic civilization and a landscape unique in its richness. As such, Yemen LNG was careful in selecting its pipeline routes and plant and terminal locations so as not to negatively alter Yemen's trea-

*A computer-generated image of Yemen's future LNG plant*





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**When fully  
operational, the  
project will provide  
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tures. Yemen LNG has already completed its Impact On Public [IOP] and Environmental Impact Assessment [EIA] studies. When fully operational, the project will provide jobs for about 500 employees. Specific training programs will be set up to ensure the transfer of the necessary skills to Yemenis so that their participation in the project is maximized without compromising quality and standards, thus providing long-term development for the population. The program will have specified objectives and its progress will be reviewed annually. Living facilities will be constructed at the plant site, with communication links to main city centers in Yemen. The plant will request many technical and support services where Yemeni companies will have to play their role, thus contributing to the development of local industry.

#### **Marketing in the Spotlight Again**

After the Asian crisis, with markets returning to the growth path, marketing activities are entering a new era and are focused on core

markets where Yemen LNG believes it has specific advantages: Korea, United States, India, and China. Yemen's geographical location – near India and half way between Far East Asia and Europe – makes it a potential competitive producer in any market. Furthermore, the specifications of its LNG make it acceptable to almost any market. The participation of the Korean companies SK and Hyundai in Yemen LNG as shareholders will make it easier to enter the Korean market, which is now expanding. India is on the verge of rapidly developing its LNG market, and the geographical proximity of Yemen gives us an advan-

tage to reach that difficult market. China has huge needs for energy as well, and has just started dealing with LNG. However, the biggest change in the LNG market will come from the United States, where gas production is expected to decline soon, at the same time that gas consumption is growing. The U.S. demand for LNG is becoming so huge that it is draining LNG suppliers almost everywhere in the world. Although Yemen LNG has yet to find LNG buyers and is facing tough competition from other projects in the world, the chances to launch the project are increasing every day. ●



# A World of Petrochemicals

By Musad A. Al-Subari, Executive General Manager,  
Yemen Oil Refining Company (YORC), Sana'a

IT IS AN HONOR FOR ME TO invite you to invest in building new petrochemical-industries units (agriculture fertilizers and detergents) for domestic consumption and overseas export. Yemen Oil Refining Company (YORC) will facilitate all your needs in a professional manner for the benefit of all.

Yemen is more accessible today than it has ever been. The country has qualified personnel, modern air traffic, and encouraging investment laws. The strategic location of Yemen on the Red Sea, the Arabian Sea, and the Gulf of Aden makes the country an excellent transshipment base for routes east to west and north to south.

Any facilities that are established in accordance with ambitious and accurate strategies and plans, realizing their targets, are able to move rapidly, overcoming the obstacles they may confront. The same is true when we talk about YORC, which, in a short period of time, has been able to stand on a firm base with a strong will, interpreting the political views and perspective of the Yemen integrator and the leader of the development process, President Ali Abdullah Saleh, to achieve the required development for the country.

Hence, YORC looks forward to establishing its future status by offering development in the oil industry, expanding its current facilities, and managing and operating the company in such a way that production may be raised to 25,000 barrels per day.

Yemen Oil Refining Company has set various goals following feasibility studies of the petrochemical industries, identifying the most significant domestic needs. Top of the future plans are developing the refineries and multiplying production. Meanwhile, YORC encourages and supports investment in the field of petrochemical industries – particularly in small projects – due to the availability of raw materials for such industries.

Regarding refinery expansion, the feasibility studies on the Marib Refinery have been completed. We are now look-



Musad A. Al-Subari

ing for new investors to finance this project. Regarding investment in the field of petrochemical industries, the company has conducted primary feasibility studies for some projects. These studies concluded that establishing such projects would produce profits for investors and the national economy.

Yemen Oil Refining Company was established as an independent economic unit and affiliate of the GYCOG, according to the Republican Resolution No. 46 dated 1996. The Republican Resolution No. 311 was issued for the appointment of the

with applicable specifications in the Republic of Yemen

- Implementing policies and market plans directed to meet the demand for oil products
- Conducting studies and research in the field of oil refining
- Executing a number of small projects in the field of petrochemical industries
- Developing the company's staff's skills in various specialty areas
- Developing and implementing safety rules and regulations at the refining units operating in the Republic of Yemen
- Carrying out other tasks required in accordance with company's business strategy, the company charter, and the applicable law, resolutions, and regulations

The future plans of the company include the following:

- Standardizing the refining policy in Yemen under a single authority after the establishment of the new refineries
- Carrying out a promotional campaign for the projects of modernization and expansion of the Aden and Marib refineries
- Following up on the execution of new refining projects, and promoting in-



general director of the company.

The business framework of the company is as follows:

- Operating the Marib Refinery since its handover from the Yemen Hunt Oil Company in December 1998
- Developing the refinery and the company's business
- Importing and exporting petroleum products as required
- Expanding the existing refining units and building new units whenever applicable
- Supervising and controlling marketing and related activities in conformity

vestment in petrochemical projects

- Searching for further potential resources to increase the company's income
- Working to improve the petroleum products' specifications in order to comply with new developments in the field
- Establishing a database containing data, information, and studies relating to the refining and petrochemical industries, which is necessary to oil companies operating in Yemen
- Participating in and encouraging the organization of economic and scientific conferences and seminars focusing on



**Two of the goals of  
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the refining industry, whose objective is to promote investment in the field

- Studying fertilizer-industry projects
- Studying detergent-industry projects
- Studying and carrying out expansion and modernization of the Marib Refinery laboratory

Investment opportunities at the existing refineries include modernizing the Aden Refinery and expanding and modernizing the Marib Refinery in order to achieve a production capacity of 25,000 barrels per day. In addition, the Rass Issa Refinery was established by Presidential Decree No. 59 in 2003, signed by the Ministry of Oil and Minerals and the Hood Petroleum Company. The expected capacity of this refinery is 45,000 barrels per day.

Similarly, the 2002 Presidential Decree No. 38, signed by the Ministry of Oil and Minerals and the Hadhramout Refinery Company, established the Al-Dhaba Refinery project (Governorate of Hadhramout). The foundation stone of this refinery was laid by His Excellency President Ali Abdullah Saleh. The refinery's prospective capacity is about 50,000 barrels per day.

Two of the goals of Yemen's refining policy are to complete investment circles in the field of oil and gas, which have proved to be fruitful, and to meet the demand for oil derivatives. Other investment opportunities may be found elsewhere in the petrochemical industries – for example, in the establishment of the hydrogen-cracking plant at the Aden Refinery and the development of the fertilizer and detergent industries.

#### **The Fertilizer**

Industry in general represents one of the most important resources for the national economy. Some projects depend on using refinery products as raw materials. Because of Yemen's agricultural nature, YORC began a preliminary

study for projects in the fertilizer industry. Through a survey of all governorates, and information from the concerned authorities, it was found that Yemen imports a great deal of fertilizers from neighboring or other countries – more than 350,000 tons per year. The government's plan to make agriculture a high priority, and the expectation of a continually increasing demand for fertilizers, led the company to think seriously about producing these substances locally. This would save hard currency and create work.

Moreover, investment in this field is beneficial for several other reasons. For instance, the availability of raw materials, in addition to Yemen's strategic location, makes it possible to export the product to neighboring countries in Africa, which are considered to be promising markets. Prime Minister Abdulkader Bagamal issued Resolution No. 134 in December 2003 about this matter. The resolution established a committee formed by members of the ministries of oil, agriculture, and industry. They will study fertilizer-industry projects and open investment in this field.



## **Yemen's Oil Refineries**

### **Aden Refinery**

- Situated in the city of Aden, approximately 360 kilometers to the south of Sana'a
- Current capacity is 90,000 barrels per day
- Operation started in 1954
- The refinery produces LPG, jet fuel, gasoline, diesel, kerosene, fuel oil, and asphalt

### **Marib Refinery**

- Situated in a historic city in the Marib governorate, approximately 230 kilometers to the northeast of Sana'a
- Current capacity is 10,000 barrels per day
- Operation started in 1986
- The refinery produces light naphtha, gasoline, diesel, and fuel oil

### **Detergents**

The construction of a linear alkyl benzene plant aims to produce the petrochemical intermediate linear alkyl benzene (LAB), which is used as the raw material in the production of many kinds of detergents. Many local factories use this material in large quantities. Currently, this material is imported from outside the country by spending hard currency. If it is manufactured in the local market, it will save money and support our local economy. Moreover, the raw materials for the production of LAB are available locally, wherever kerosene or gas oil is produced in large quantities – for instance, at the Aden Refinery. ●

# YPC's Tremendous Strides

An Interview with Omar M. Al-Arhabi,  
General Manager, Yemen Petroleum Company (YPC), Sana'a

**EDITORS' NOTE** Omar M. Al-Arhabi joined Yemen Petroleum Company (YPC) in 1991 and recently served as vice general manager for commercial and financial affairs. He previously served as financial director, purchasing director, and training director. A Ph.D. candidate in marketing, he holds a bachelor's degree in business management and an M.B.A. in marketing. He is currently a board member of Yemen Commercial Bank and Arab Insurance Company.



Omar M. Al-Arhabi

## How would you describe Yemen Petroleum Company's role in Yemen's energy sector?

Yemen Petroleum Company [YPC] has played a key role in Yemen's energy sector for more than 40 years. Some of its roles have, since then, been gradually reassigned to existing or newly established companies to give more defined roles to these units. After its establishment in 1961, YPC served as the exclusive importer and distributor of petroleum products within the Republic of Yemen. It was also the exclusive agent and distributor for lubricant products, and the exclusive importer and distributor for liquefied petroleum gas [LPG] within the country.

Today, we have the Yemen Petroleum Refinery Company, which supplies the YPC with the petroleum products that YPC, in turn, distributes. We also have the Yemen Gas Company, which now handles all activities relating to the distribution of LPG. As for lubricant products, YPC auctioned out the agency rights to the private sector to encourage market activity.

Despite handing over the lubricant agency rights to the private sector, YPC still plays a strategic role in preserving the balance of the market. We maintain a large stock of lubricants, from all brands, with quantities based on consumer prefer-

ences and consumption. These are held with the aim of preventing individual agents from monopolizing the market, or in case there is a lack of supply to the market. When that happens, YPC will supply the market with the products in demand and allow for a price balance to remain, ensuring that the end user is not harmed. In addition to the strategic stock, YPC holds an active stock that it sells regu-

port private-sector participation, YPC gives qualified businesses agency rights that allow them to sell some of these products with a commission. Airports are supplied by YPC directly – with the exception of Aden International Airport, which is supplied by BP – as are the majority of the government and defense bodies.

## How do you see YPC's role in Yemen evolving in coming years?

YPC is playing a very active role in the development of Yemen, and we project this participation to grow more over the years. We have made a great effort to break away from the historic binds that have left the country's infrastructure in arrears of its actual potential.

YPC is moving to address these efforts on several fronts. To begin with, we are now focusing on recruiting talented young executives to occupy the company's management positions. We are looking for educated and innovative bright minds that will refresh the image and persona of the company. In addition, the company is opening its doors wide for the Central Organization for Control and Audit to create a strong and vigilant system of checks and balances.

On another front, we are requiring that fueling stations all over the republic implement specific structural and design

specifications in their stations which would place the typical Yemeni gas station at the vanguard of international standards.

Everyone should know that the Yemen Petroleum Company and Yemen, with its entire social and industrial infrastructure, is making conscious and tremendous strides toward development. We are in touch with the leaders of today's markets all

over the world, in all aspects of commerce and development, working with them toward advancing our own markets and industries to put us on the same level as major international-market players.

## In what ways does YPC interact

*The new Yemen Petroleum Company building*



larly as an active player in the lubricants market.

With all this in mind, the primary activity remains petroleum marketing and distribution. YPC supplies the entire market demand for mogas, diesel, turbine, kerosene, and fuel oil within the country. However, to encourage and sup-





### **with Yemeni and international energy companies?**

YPC's interaction is limited in this regard. We supply the needs of these companies, along with any other type of company that requires fuel supplies in the republic. Whether they are an oil-exploration company, a contracting firm, or any other type of company, they always need a source for their fueling needs, and that's where we come in.

As far as oil and energy investment operations are concerned, we do not typically do that because that is the function of the Yemen Petroleum Investment Authority, which is another body that reports back to the minister of petroleum and mineral resources. As I mentioned, the objective of having these multiple units under the Ministry of Oil and Minerals is to create more defined roles, to ensure greater effectiveness in the government's operations. ●

## **LETTER TO THE EDITORS**

Reading through previous issues of LEADERS brought me to a critical realization. An introductory comment by Henry Dormann addresses the misperception held by many people across the world regarding the nature of large businesses (in all its ethical- and social-responsiveness aspects). Mr. Dormann states that the dishonest reputations of some [companies] even include the companies' leaders. I believe that this misperception grows with the growth of the company. It is a part of human nature that we tend to pass judgment on what we are not able to grasp. And the

**It is a part of human nature that  
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greater the success and growth of the company, the greater the animosity that grows with it in those vigilant eyes in the public. This is a result of the public contention that such success can only come with the corrupt and unethical means that have become a defining aspect of their understanding of corporate culture. I strongly believe that this perception is fed by the simple fact that they lack proper knowledge and accurate facts that would reverse this natural tendency to attack and mistrust.

As the head of a Yemeni company with annual revenues of nearly \$1 billion, I appreciate the bold state-

ment by Mr. Dormann, and I strongly support his call for company leaders all over the world to face this reality and take active steps to better change this perception. I agree with him that it is, in fact, up to each company to do this, and that it is up to the CEO to initiate and actively participate in taking a leading role to make this happen.

This can be done by encouraging increased levels of transparency in the company's activities, and initiating public awareness programs (specific to the company's social environment) that would reflect the company's commitment to its social responsibilities and also address its concern for its image in the public eye. By doing this, the company will earn the trust of its public. They will be well informed and gain a sense of touch with the company. Furthermore, the company should hold the sense of a greater mission being embarked upon with the initiation of these actions: that, as a part of the cyclic give-and-take social circle, it is playing the role that is imperative upon it as a member of the society that is feeding its success and growth.

Mr. Dormann concluded his message by asking for any ideas that might be helpful. I wish to thank him for his message, for the opportunity to express my ideas. I am sure that within the vast global corporate culture, great minds may feed others, putting us one step closer to improving ourselves with each interaction. And with LEADERS as the platform for this interaction, it inspires its readers across the globe that they too can act as a catalyst for change towards a better global community.

**Omar Mobammad Al-Arbabi,**  
*General Manager, Yemen Petroleum Company*

**I appreciate the bold statement by Mr. Dormann,  
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steps to better change this perception.**

# A Remarkable Long-Term Partnership

An Interview with Alistair J. Mooney, President and General Manager, Canadian Nexen Petroleum Yemen, Sana'a

**EDITORS' NOTE** Alistair Mooney has been with Canadian Nexen (formerly Canadian Occidental) since 1977, and was the individual who discovered the first well, called Sunah, for the company in Yemen. He was permanently stationed in Yemen in 1990, was appointed exploration manager in that country in 1993, and, after working on development and production projects in the North Sea, Romania, and the Middle East, was appointed vice president responsible for all international exploration in 1999. He was appointed to the position of vice president, international operations, in 2004. A graduate of the University of Calgary, Mooney is a member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.



Alistair J. Mooney

## How would you describe Nexen's history in Yemen?

The Masila project in Yemen is a remarkable example of a successful long-term partnership. It is built on cooperation and collaboration among Nexen, the Yemen government, and community members, including those living close to our Masila operations. We established our first Yemen office with an initial production sharing agreement [PSA] signed on March 15, 1987. The PSA covered a six-year, two-phase program of seismic and drilling exploration in the 37,200-square-kilometer Masila block 14. Nexen is the operator of the block, with a 52 percent working interest.

On December 25, 1990, our first discovery well, Sunah-1, reached a depth of 2,732 meters and found four meters of oil-bearing Kohlan sand, along with six meters of oil in the Qishn formation, where most of the oil reservoirs in the Masila area are located. Commerciality was declared on December 18, 1991, with the well's first oil production celebrated by Yemen's President Ali Abdullah Saleh on September 23, 1993.

The strength of the project was initially grounded in the Sunah, Heijah, and

Camaal fields, with peak production estimates of about 120,000 barrels per day. Since then, proven reserves have more than quadrupled, due to the ongoing success of exploration activities, resulting in 17 producing fields on Masila today. Production reached a plateau of 230,000 barrels per day over the period from 2001 to 2003, and is expected to have averaged 210,000 barrels per day in 2004. Masila continues to be an efficient and economic operation, with low production costs of about \$1.95 per barrel in 2003.

The success of the Masila project was a major contributor to the growth of Nexen's overall company assets. Production and cash flow from the Masila project has increased every year since first oil production in 1993. Nexen found more opportunities for oil development on the Masila block over the last 10 years. Nexen found Yemen to be a very favorable location in which to invest for the development of oil production. Nexen, its partners Occidental Petroleum and Consolidated Contractors, the government of Yemen, the Ministry of Oil and Mineral Resources, the governorate of the Hadhramout, and the local communities have been working together for the past 17 years to maximize the value of the Masila oilfield.

## In what ways do you see Nexen's activities in Yemen evolving in the coming years?

Oil production from the Masila field has reached its maximum after 10 years of growth and plateau oil production. The challenge for Nexen in the future is to maximize the value of oil production by reducing the cost of producing the oil. Initial reservoir depletion plans will maximize and enhance oil recovery from existing fields. Nexen has explored new blocks in Yemen in the past, and will continue to explore new areas of the country when the opportunities arise.

Nexen will also continue to be involved in community-relations projects,

which help local communities initiate and sustain projects that benefit as many citizens as possible.

## What has Nexen found most challenging about doing business in Yemen?

Nexen has found Yemen a very fair place to do business and has spent time and effort developing business relationships with stakeholders in the country for the benefit of the company and the Republic of Yemen.

When Nexen first started oil exploration in 1987, the oil industry in Yemen was in its infancy. Material and services required for exploration and early oil-field development had to be sourced and imported into the country. Long lead-time planning was required to obtain the proper materials. Authorities within the Yemeni government were most helpful in facilitating the speedy importation, customs clearance, and transportation to allow exploration and development to take place. Now Yemen has many skilled companies that provide oil-field services. Initially, the workforce was not skilled in oil-field jobs; now over 75 percent of Nexen's workforce is Yemeni.

Presently, our greatest challenge is to maintain oil-field production at high levels. The Masila block is the largest oil-producing project in Yemen, accounting for more than half of the country's total oil production. Oil makes up approximately 70 percent of the country's revenue.

Nexen has found the stability of the production sharing agreement, signed in 1987, most beneficial to doing business and investing in future opportunities on the Masila block. The terms of our agreement with the Yemeni government have not changed since its initial signature, and there have been limited additions of taxes or tariffs. This has enabled Nexen to plan its capital investments with confidence in the expected returns. In other oil-and-gas jurisdictions, taxes and other levies are imposed on oil companies after discoveries.

The long-lasting business relationships with the Yemeni government and people have been very satisfying for Nexen and its employees. ●



# Communicating with the World

By the Honorable Eng. Abdulmalek Almualemi, Minister of Telecommunications and Information Technology

THE MINISTRY OF TELECOMMUNICATIONS and Information Technology is the regulatory body of the telecommunications and information sector in the Republic of Yemen. It is responsible for drawing up strategic policies to develop the telecommunications and information sector and to organize its structural management. It also directly supervises all telecom operators in the field of telecommunications, information, and postal services. The ministry is the body authorized to deal directly with long- and short-term telecom development plans.



*Hon. Abdulmalek Almualemi*

## Public Telecommunication Corporation

The Public Telecommunication Corporation (PTC) was founded in 1990 upon the merger of the Public Communication Corporation, based in Sana'a, and the Yemen Telecommunication Corporation, based in Aden. The PTC is responsible for the management, supervision, and execution of all telecommunications services and projects coming under the umbrella of the Ministry of Telecommunications and Information Technology.

Since its establishment, the PTC has continued to lead significant development projects in the telecommunications sector. These projects reflect the strategies and policies of the Yemeni government and the social need.

The PTC has achieved high annual profits in recent years, and it is considered one of the resources that support the national economy and the government treasury. The equipped switching capacity in 1990 was 153,866 lines. By 2000, 460,736 lines had been completed. By the third quarter of 2004, the PTC had reached a total capacity of 1.1 million lines.

In its initial stages, the PTC used analog-radio rural telecom systems from the Italian company ITALTEL and the American company SRT Communications, which are both powered by solar-energy systems. In the last few years, the Yemeni government has obtained a Japanese assistance pro-

gram for developing telecom in Yemen's rural areas. Through that program, a digital-radio rural telecom system, using TDMA (time division multiple access) technology from NEC, was installed. This assistance program is still ongoing today.

The PTC introduced DLC (digital loop carrier) systems by using cabinets as access systems on the optical-fiber cable routes. One such cabinet is called UMC1000, manufactured by an American company named Advanced Fiber Communications, and the other is called HONET, manufactured by a Chinese company named Huawei. In addition, fixed wireless local loop systems were installed. Some of them were using DECT technology from the German company Siemens and the Greek company Intracom, while others used CDMA (code division multiple access) technology from two American companies, Motorola and L-3 Communications.

Approximately 75 percent of the Yemeni population is settled in rural areas. The coverage rate is remarkably low in these areas, due to the mountainous terrain, lack of public electricity, and high cost of connecting the service to these areas. In spite of these constraints, the revenue from rural lines is higher than the revenue from PSTN (public switched telephone network) fixed lines, due to continuous high usage by people living in rural areas. By the third quarter of 2004, the number of rural telephone lines reached 108,741.

## Information and Communication Technology City

Information and technology have imposed on the world one language that makes it seem like one small village, without boundaries or obstacles. Since 1969, a number of countries have established "technology towns." These towns attract talent in all fields of technology, providing those people with opportunities to create a quality transformation. This could have an impact on the progress of these countries, by founding a solid base for research and technological development, stimulat-

ing private investments in information technology, and encouraging modern technologies in governmental institutions.

Building up manpower is the initial and most important step in the march of progress. In this regard, the idea emerged to establish a communications and technology town in Yemen, built upon modern foundations. The prime minister's Council Resolution No. 4 in 2002 formed the basis for transforming this dream into reality.

What does "technology town" actually mean? The expression describes an integrated technical complex concerned with the communications, technology, and programming industries, attracting specialists in all fields and helping them to transform their creative ideas into production with economic benefits. The complex is formed by a number of centers and specialized companies working in the field of information and communications technologies and in the programming industry.

## Objectives of the Technology Town

- To provide an appropriate premise for public, private, and mixed sectors and to include specialized training centers for the development of programming, its application, the collection of data, and the marketing of computer apparatuses
- To develop a type of integration through the pursuit of different activities in one location, facilitating the acquisition of information for change through committees and institutions
- To get information to academics – students and researchers – quickly and accurately
- To encourage the private sector to invest in the specialized institutions of communication, information, and programming technologies
- To raise the standard of awareness in the community, introducing the public to the concepts of technology and encouraging talented young people to establish their own creative projects by granting them use of the facilities available in the town
- To lay down principles, measurements, and standards concerning communication and information technologies

- To encourage people to purchase and use computers, and train them on their uses

### Components of the Town

The first stage consisted of five months of continuous work to achieve the foundations of the current buildings. This was meant to prepare our country for its movement into a digital epoch, and to establish a generation of people armed with awareness and a basis for establishing national companies with a high degree of efficiency and high-tech capability. The total cost of the first stage reached 2.2 billion Yemen riyals (\$12.3 million) and it was inaugurated by the president of the republic on June 6, 2002.

This initial stage included the following components:

- The General Institute for Communications
- Outcomes communications network
- Yemen Internet
- Industry center and programming development
- Internet café
- E-mail library

### Internet Service

In early 2002, the Public Telecommunication Corporation prepared the Yemeni gate to provide Internet access. The equipment was installed in five cities: Sana'a, Aden, Ta'izz, Al-Hodeidah, and Al-Mukalla. This included 12 sites that provide services for 30,000 members. Internet service is provided through a dial-up system or leased lines.

The technical characteristics of the Yemeni gate are as follows:

- 64 Kbps to 2Mbps
- Connection to the World Wide Web two ways, via satellite or fiber-optic cables
- Capacity for 65,000 users, which is expandable to 160,000
- The possibility of providing more than 16 service providers with high-speed connections all over the country
- Reaching the service providers' servers through the information network (Network Data)
- Providing connection for international channels of more than 100 megabytes

The world changes rapidly as far as telecommunication technology is concerned. Due to these changes, Yemen has witnessed a remarkable increase in computer and Internet use. The rate of subscription to the Internet in Yemen reached 3.15 for every 10,000 people in 2000. In mid-2002, during the preparation of the Yemeni Internet gate, the rate of international subscribers reached 0.2 percent. The number of computers was 36,000, or one computer for every 500 people. The PTC started introducing high-speed Inter-

net service in December 2004. This service has an initial capacity of 11,000 subscribers, and can be expanded according to demand. This service exists in the major cities, such as Sana'a, Aden, Ta'izz, Al-Hodeidah, Ibb, Al-Mukalla, and Seyoun.

### Yemen Mobile

Yemen Mobile has become one of the most fruitful projects of the PTC because of its loyal, experienced employees. The Yemeni public regards the PTC as a gateway connected to the world with modernized tech-



*The Ministry of Telecommunications' main office*

nology. It is copying the accelerated development in the field of telecommunications and information technology, aiming to make a remarkable leap in Yemeni society.

Due to all these changes, the PTC has inaugurated the Yemen Mobile service, which is a government entity run by locally qualified employees. The cost of the mobile service coincides with the purchasing ability of Yemeni citizens and, using high technology, it can cover a large part of the country.

At this stage, all major cities, most towns, and the main routes between them have been covered by installing a huge number of base transceiver stations. This represents 70 percent of the populated agglomerations, including Yemen's rural areas. The PTC is aiming to increase the coverage area to 90 percent of the whole populated area, including islands such as Socatra Island.

The goals of Yemen Mobile are:

- To facilitate the Yemeni citizen to get acquainted with the latest technology in the telecommunications field
- To support the purchasing power of the different levels of society and provide them with services that can assure the maximum utilization of the mobile service by the public
- To create new employment opportunities for young people and graduate students from colleges and universities

### Advantages of Yemen Mobile's System

- Technical advantages: Yemen

Mobile's system uses CDMA technology, which is considered a third-generation system and currently supports a speed of 153 Kbps.

- Health advantages: The power consumption of the CDMA handsets reaches around 200 megawatts, which is less than other systems using high wavelengths that might affect the user's health.

- Social advantages: The system provides full security for calls, as it uses a coded system that can give each call its own wavelength and bar any call from foreign interception.

- Other advantages: Yemen Mobile enjoys full flexibility and can be upgraded to higher levels through the addition of simple software. Yemen Mobile offers high purification in voice and data services. Yemen Mobile can easily be interconnected with other systems and related international standard protocols.

### Services Provided by Yemen Mobile

Besides the normal supplementary services provided by any mobile operator, such as SMS (short message service) and VMS (voicemail service), Yemen Mobile's network provides the following attractive services:

- Push to talk (PTT): Through the mobile system, users can enjoy a walkie-talkie service. This service can be utilized by car companies, tourist companies, hospital ambulances, etc.

- Internet access: This service is the first service in Yemen that allows users to access the Internet backbone using Yemen Mobile handsets as a modem, with a speed reach of 153 Kbps.

- Fax service: The handsets support fax modems and can be used to send or receive faxes via Yemen Mobile's network. Handsets that don't support this function can be used as modems, and can be connected to a PC to send and receive faxes.

- The family-number service: This service allows subscribers to make their calls with lower tariffs by using short numbers.

- Multimedia service (MMS): This service allows Yemen Mobile subscribers to send and receive color pictures, short clips, rings, and e-mails.

- Wireless application profile (WAP) services: In the near future, this service will be available to allow subscribers to browse Web sites that support WAP services using the handset itself.

- Virtual private network (VPN): This service provides the possibility of forming work group(s) and allowing some authorized individuals to send or receive calls from outside the group(s). Calls within the same group have lower tariffs. ●