

أرامكو السعودية  
Saudi Aramco



ANNUAL REVIEW 2006

# taking the **initiative**







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**King 'Abd Allah Ibn 'Abd Al-'Aziz Al Sa'ud**  
THE CUSTODIAN OF THE TWO HOLY MOSQUES



**His Royal Highness Amir Sultan Ibn 'Abd Al-'Aziz Al Sa'ud**  
THE CROWN PRINCE, DEPUTY PRIME MINISTER, MINISTER OF DEFENSE AND  
AVIATION, AND INSPECTOR GENERAL

## KEY FIGURES

<b>Oil reserves and production</b>	Recoverable crude oil and condensate reserves	259.9 billion barrels
	Crude oil production (average per day)	8.9 million barrels
	Crude oil production (annual)	3.25 billion barrels
<b>Gas reserves and production</b>	Gas reserves	248.5 trillion cubic feet
	Gas production (average per day)	8.22 billion cubic feet (raw gas to gas plants)
	Gas production (annual)	3.00 trillion cubic feet (raw gas to gas plants)
<b>Natural gas liquids (NGL)</b>	NGL production (average per day)	1.1 million barrels
	NGL production (annual)	399 million barrels
<b>New discoveries</b>	Gas fields	Zimlah, Kassab, Nujayman
<b>Wells completed</b>	New oil wells	333 294 onshore, 39 offshore
	New gas wells	35 35 onshore, 0 offshore
	Total recompletions	125 onshore, 47 offshore
<b>Workovers</b>	Gas wells	5 onshore, 0 offshore
	Oil wells	126 onshore, 69 offshore
	Total oil well workovers	195
	Total workovers	200

### ABBREVIATIONS USED IN THIS REVIEW:

bpd = barrels per day  
 scfd = standard cubic feet per day  
 ppm = parts per million  
 LPG = liquified petroleum gas  
 NGL = natural gas liquids  
 MRC = maximum reservoir contact well  
 AFK = Abu Hadriyah, Fadhili &  
 Khursaniyah crude oil increment



## BOARD OF DIRECTORS



### **Front Row** (left to right)

H.E. Dr. Abdul Rahman A. Al-Tuwaijri  
H.E. Dr. Ibrahim A. Al-Assaf  
H.E. Ali I. Al-Naimi  
Abdallah S. Jum'ah  
H.E. Dr. Abdulaziz I. Al-Mana  
H.E. Dr. Mohammed I. Al-Suwaiyel

### **Back Row** (left to right)

Abd Allah S. Al-Saif  
Victor G. Beghini  
James W. Kinnear  
Abdulaziz F. Al-Khayyal  
Khalid A. Al-Falih

## CHAIRMAN'S MESSAGE



For many decades, oil and gas have fueled the prosperity of countries and communities the world over, and have contributed immensely to the development of Saudi Arabia. Energy is essential in today's world, and because Saudi Aramco is a substantial supplier of petroleum to so many markets across the globe, reliability is not simply a goal for the company, it is an imperative.

I am proud to note that once again in 2006, Saudi Aramco maintained its record of unmatched operational reliability, meeting the energy needs of customers and consumers throughout the Kingdom and around the world.

But true reliability is not just a matter of present performance; it also involves taking the initiative and proactively addressing future challenges.

For Saudi Aramco, this means an innovative approach to its domestic and international business activities, a well-planned and well-executed series of major

hydrocarbon projects, optimal investments in infrastructure all along the value chain, stewardship of the natural environment, and a vigorous program of research and technology development. Above all, it means developing the company's people, and ensuring they have the skills, knowledge and expertise to excel in the years and decades to come.

These activities were an integral part of Saudi Aramco's efforts in 2006, and the company closed the year even better positioned to seize the many opportunities that lie ahead.

I would like to thank the Custodian of the Two Holy Mosques, King 'Abd Allah Ibn 'Abd Al-'Aziz Al Sa'ud, and Crown Prince Sultan Ibn 'Abd Al-'Aziz Al Sa'ud for their continued guidance and unwavering support, and to express my appreciation to my fellow members of the Board for their sage counsel. I also wish to take this opportunity to congratulate the company's employees on an outstanding year of achievement. In the end, it is these dedicated men and women who have enabled Saudi Aramco to take the initiative, and to meet tomorrow's challenges today.

A handwritten signature in black ink, reading 'Ali I. Al-Naimi'. The signature is fluid and cursive, with a large, stylized 'A' at the beginning.

**Ali I. Al-Naimi**

Minister of Petroleum & Mineral Resources,  
The Kingdom of Saudi Arabia  
Chairman of the Board of Directors,  
Saudi Aramco



## PRESIDENT'S FOREWORD



This year's *Annual Review* chronicles a major energy enterprise on the move – taking the initiative, tackling the future and pushing the envelope. It traces the developments in every facet of Saudi Aramco's extensive and expanding business portfolio, and notes the substantial progress made on a wide variety of mega-projects and major corporate programs.

Without a doubt, the impact of these activities will be felt for decades to come. But to my mind, the enduring achievements of the past year were not only about petroleum, but also about people.

I take great pride in being part of a 52,000-strong team of Saudi Aramcons, and I derive enormous satisfaction from the incredible energy my colleagues bring to their

jobs, whatever their field of endeavor or professional discipline. Their example and enthusiasm never cease to inspire me, and I thank each one for his or her contributions to the company's success in 2006.

This *Review* goes beyond the company's boundaries and reminds us of the enormous positive impact that Saudi Aramco and its people have on our fellow human beings around the world.

Modern life would simply be unimaginable without petroleum and the many indispensable products that it provides. From helping to raise living standards for entire societies to enabling individuals to pursue more mobile, more dynamic and more satisfying lives, we at Saudi Aramco never forget that our efforts are measured not only in barrels and cubic feet, but also in promises kept, prosperity delivered and possibilities realized.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

**Abdallah S. Jum'ah**

President & Chief Executive Officer,  
Saudi Aramco

## TAKING THE INITIATIVE

When we look at the global energy situation today, we find a convergence of a wide range of complex challenges. These include *misperceptions about future adequacy of supply, under-investment in oil infrastructure, a mismatch between refinery configurations and the types of crude in the market, increased demand for natural gas, the need for a well-trained and innovative workforce, and stewardship of the natural environment.*

Perhaps never before has the petroleum industry faced such immense challenges — or been presented with so many promising opportunities. At Saudi Aramco, we are taking the initiative to address these challenges and assure a steady, reliable supply of the petroleum energy the world needs now — and in the future.

Worldwide energy demand continues to expand dramatically. According to the International Energy Agency (IEA), global energy demand is projected to increase by more than 50 percent by 2030, with half of the increase accounted for by electric power generation and one-fifth by transportation, the latter almost entirely in the form of oil-based fuels. Oil will remain the largest single source of fuel, with demand projected to rise from the 2005 rate of 84 million barrels per day (bpd) to 116 million bpd in 2030.

While the issue of oil supply is important today, it will become even more critical in the coming years. We believe petroleum will be plentiful for many decades. Although we currently manage crude oil reserves of approximately 260 billion barrels, we continue to expand our reserve base. At current production levels, we have many decades' worth of oil to produce.

When disruptions have occurred to various producers in recent years, Saudi Arabia, as it has for decades, ramped up production to reassure energy markets and provide consumers with a steady, reliable supply of petroleum.

As an enterprise, we are committed to playing our part in meeting future demand growth and we're backing that commitment by embarking on the largest capital program in our history.

We currently have half a dozen major crude oil increments at various stages of development, with a total production capacity of some 3 million bpd. Some of that capacity will offset natural decline, while the remainder will expand our maximum sustained production capability, which by the end of 2009 will reach 12 million bpd. We have also developed scenarios to increase that level, should market conditions warrant expansion.

Our slate of mega-projects also will enable us to maintain spare production capacity of 1.5 to 2 million bpd above forecast production, in keeping with the Kingdom's commitment to keep world markets stable.



AT SAUDI ARAMCO, WE UNDERSTAND THAT EVERYTHING WE DO — FROM EXPLORATION AND PRODUCING TO REFINING AND DISTRIBUTION — CONTRIBUTES TO THE WELL-BEING OF BILLIONS OF PEOPLE, AT HOME AND AROUND THE GLOBE.



**TOP:** WE ARE WORKING TO RAISE OUR MAXIMUM SUSTAINED CRUDE OIL PRODUCTION CAPABILITY BY SOME 3 MILLION BPD.

**ABOVE:** IN THE DOWNSTREAM SECTOR, WE ARE DEVELOPING SCENARIOS TO ADD REFINING CAPACITY BOTH AT HOME AND ABROAD.

The challenges present in the worldwide refining industry have also created a unique set of opportunities for companies willing to seize them. We are expanding our worldwide refining capacity through overseas joint and equity ventures. Domestically, we are preparing to build two new export-oriented refineries. In addition, we are proceeding with the construction of our joint-venture PetroRabigh integrated refining-petrochemical project.

Worldwide, the petroleum industry is facing a major hurdle in finding the human resource talent necessary to tackle the coming challenges. Since the inception of Saudi Aramco nearly 75 years ago, we have operated one of the largest industrial and professional training programs in the industry. Our predominantly Saudi workforce has guided the company to the prominent position it holds in the world today. We continue to develop and deploy at every level the latest training and professional development programs across our entire business, from engineering and exploration to health care and IT.

The petroleum industry is not only facing challenges regarding supply, infrastructure and human resources, but also a broad array of environmental challenges that must be met and overcome. One response is the development of alternative energy sources. According to IEA forecasts, the share of renewable energy sources such as wind, solar, photovoltaics and sea wave energy will rise to about 8 percent of the world's primary energy mix by 2030, with the remaining 92 percent coming from non-renewable sources.

At Saudi Aramco, we believe development of alternative sources of energy is important, and given the projected growth in total demand, contributions from all sources will be needed. However, many projections for energy supplies from alternative sources may not be realistic, and if decisions about adding conventional energy supplies are made on these projections, the world could face a significant gap between demand and supply.



While a number of renewable and alternative energy sources have long-term promise, they face considerable technical, environmental and commercial hurdles. Their development should be pursued wisely and on the basis of commercial viability and technical feasibility.

Because fossil fuels will continue to meet the lion's share of the world's energy needs for many decades to come, improving their efficiency and lightening their environmental footprint are among the most important steps that can be taken to preserve the natural world for future generations.

The challenges faced by both energy producers and consumers alike are considerable, but we believe the Kingdom of Saudi Arabia, and by extension its national petroleum enterprise, Saudi Aramco, is uniquely placed to respond to these pressing needs. Our unmatched crude oil reserves, our relatively low exploration and development costs, our technological prowess, our long experience in managing mega-projects, and our financial strength position us to honor our commitments over the long term, both abroad and at home.

Domestically, our role is to leverage the Kingdom's hydrocarbon reserves to benefit its people and expand its economy. Our program of investments and initiatives addresses both domestic objectives and the larger energy trends shaping the global economy.

At Saudi Aramco, we understand how much the world depends on our activities and operations: This involves not just abstract supply and demand figures, but rather the livelihoods and living standards of billions of people. Those of us in the petroleum industry have both the responsibility and the privilege of enabling people around the globe to live fuller, more meaningful and more productive lives, while building a still more prosperous future for their children. This is an obligation we take very seriously.

... oil will remain the **largest single source of fuel** with demand projected to rise to 116 million bpd in 2030.



SUPERTANKERS TAKE ON CRUDE OIL AT RAS TANURA'S SEA ISLAND TERMINAL. IN 2006, COMPANY TERMINALS LOGGED MORE THAN 1,900 SHIP CALLS FOR CRUDE OIL, REAFFIRMING OUR POSITION AS THE WORLD'S NO. 1 SUPPLIER OF PETROLEUM ENERGY.



## { PETROLEUM: { POWERING THE PLANET, EMPOWERING LIVES

The world is going to need a lot more energy in the decades to come. Most of that energy will come from petroleum. At Saudi Aramco, we believe the real issues swirling around oil and gas have less to do with supply — the world has abundant supplies of petroleum — and more to do with challenges on the surface: distribution, refining bottlenecks, regulatory and business concerns, and others.

Reliable supplies of affordable petroleum energy have powered the global economic engine for many years, and will for many more.

According to *The World Energy Outlook 2006*, issued by the International Energy Agency (IEA), global energy demand is projected to increase by 53 percent between 2004 and 2030, with 70 percent of the growth coming from developing countries. Globally, fossil fuels will remain the dominant source of energy, supplying 83 percent of the overall increase in energy demand over the same period.



World demand for oil is projected to increase from 84 million bpd in 2005 to 99 million bpd in 2015, with, again, 70 percent of the increase coming from developing countries.

Energy in general, and oil in particular, is fundamental to economic development, and with it, improvements in the quality of life for billions of people around the world, especially in developing countries.

Oil and its derivative products provide us with mobility, enable us to produce all manner of goods and products, help us grow our food, keep us comfortable in the heat of summer and the cold of winter, and make our lives safer, healthier and more enjoyable.

Energy is a key factor in social, economic and even cultural development. It is indispensable to the ability of countries around the world to improve their standards of living and to enable their citizens to realize their aspirations for the future. Petroleum, in turn, is essential to the world's collective energy future.

This means that we, as an industry and as a company, are entrusted with a tremendous responsibility. We are the only petroleum company that is a major supplier to the three largest energy markets on the planet: North America, Europe and the Far East.

Every day, people around the world — from Boston to Beijing, from Marseilles to Mumbai — rely on us, the people of Saudi Aramco, to deliver a reliable supply of petroleum energy, today and for many years to come.

# THE RESERVES CHALLENGE

The world counts on Saudi Aramco to deliver a reliable supply of petroleum. Even though we have sufficient reserves to produce oil at our current rate for many decades to come, we are constantly seeking to expand our reserves base.

In 2006, we achieved crude oil reserves replacement of 104 percent, adding 3.6 billion barrels. In addition, we doubled our target for new non-associated gas reserves, adding 10.4 trillion cubic feet.

As technology has advanced and the understanding of petroleum geology and reservoir behavior has increased, projections of both oil in place and proven reserves have grown steadily, whether at the level of individual fields or global reserves.

We have embarked upon an **expanded exploration program**, designed to grow our proven reserves of oil and natural gas both onshore and offshore. With our greater emphasis on increasing production of natural gas to fuel the domestic economy, our major discoveries in 2006 were gas fields. We plan to drill more than 300 gas development wells and 230 exploration and delineation wells by 2011. In the next 10 years, we hope to add 50 trillion cubic feet (tcf) to our current 248.5 tcf of gas reserves.

In 2006, we discovered three new gas fields (see chart on page 16). In addition, we discovered a new reservoir of non-associated gas in the **Karan** oil field, which was discovered in 1967. Karan is now our largest offshore gas field. The **Midrikah** gas field, discovered in 2005, was completed in February 2006, flowing 30 million cubic feet per day of gas with 900 bpd of condensate.

Meanwhile, in the Rub' al-Khali, or Empty Quarter, Saudi Aramco's four **Upstream Gas Joint Ventures** — South Rub' Al Khali Company, Luksar Energy Limited, Sino Saudi Gas Limited and EniRepSa Gas Limited — reached a number of milestones. All four companies met their seismic commitment programs for the First Exploration Period, and at least three were considering additional seismic acquisition above their minimum commitment. At year-end, all had drilling rigs in the field. Preliminary drilling results have been encouraging. In support of the ongoing activities, two of the companies have set up seismic processing centers in Kingdom.

Our expanded exploration activities require massive investments in seismic acquisition and processing, and in reservoir characterization.

In March, we completed our two-year **3-D seismic survey of the Qatif field**. The project covered about 653 square miles (1,692 sq km) of land, marine and transitional zone, which included towns, farms and our Ras Tanura Refinery and Terminal.

The project to acquire and process 3-D seismic data for the **Khurais** oil field that began in December 2004 was completed in September 2006. This was one of our largest integrated programs, covering more than 2,700 square miles (7,000 sq km) and 2.8 million recording profiles. The final image volume covers the Khurais field and the neighboring Abu Jifan field.





WE MANAGE THE WORLD'S LARGEST CRUDE OIL RESERVES AND THE FOURTH LARGEST GAS RESERVES  
NOT FOR QUICK GAINS, BUT FOR THE LONG-TERM PROSPERITY OF THE KINGDOM AND TO ENSURE  
A STEADY AND RELIABLE SUPPLY TO OUR CUSTOMERS AROUND THE GLOBE.

MAJOR GAS DISCOVERIES IN 2006 *(in millions of cubic feet per day)*

Well	Gas flow	Condensate	Location	Depth	Field
Karan-6	80		Offshore	10,888 feet	Karan
Zimlah-1	10	660 bpd	352 km S Dhahran	14,250 feet	Zimlah
Kassab-1	10		220 km S Riyadh	15,750 feet	Kassab
Nujayman-1	60	2,040 bpd	280 km S Riyadh	15,000 feet	Nujayman

Saudi Aramco geoscientists have developed a series of innovative technologies to estimate and subsequently remove **unwanted multiple reflections** from seismic data, which mask primary events indicative of oil and gas reservoirs. These technologies have considerably reduced the risk associated with wildcat and developmental drilling and are expected to play a key role in processing seismic data from the Red Sea.

We are also conducting extensive integrated geological and simulation studies to optimize the new increments in Khurais, AFK (Abu Hadriyah, Fadhili and Khursaniyah), Manifa, Shaybah and Nuayyim.

The petroleum industry is witnessing tremendous advances in a wide range of technologies, including the massive computing power that supports numerous upstream applications. For example, the **computing capacity** at Saudi Aramco's Exploration and Petroleum Engineering Center (EXPEC) has reached 34 teraflops, or 34 trillion floating point operations per second. This represents a 300-fold increase in computing capacity since 1999, and indicates the exponential rate of development of upstream technology as a whole.

The seismic processing environment in our EXPEC Computer Center (ECC) continues to grow. In 2006, we completed the largest disk installation and seismic data migration in the center's history. A total of 650 terabytes of new storage was installed for conventional seismic processing. Additional computer capacity was achieved through new and faster High Performance Computing clusters based on commodity PC hardware. The new seismic processing environment has increased computing capacity by 47 percent and storage by 46 percent.

Our expanding computing capacity is helping us keep ahead of the curve in the crucial search for and characterization of new reserves.

Our own **POWERS** simulator employs refined multi-million cell models to optimize development of multilateral maximum reservoir contact (MRC) wells, equipped with "Intelligent Well" completions. Powerful parallel processors enable us to reduce computational time from a few days to a few hours.

The ECC designed and opened the **Event Solution Center**, a state-of-the-art approach to reservoir studies wherein the collective skills of multi-disciplinary experts are focused on detailed uncertainty analyses and risk assessment processes. This approach, which compresses major decision cycles, reduces uncertainty and provides a wider range of alternatives, has yielded success in the Safaniyah and Manifa fields and is being applied in North 'Uthmaniyah. Completion time for studies has been reduced from one to two years to one to three months.

Given the scope of our operations, it is no surprise that we have more than 4 million engineering drawings representing the logical and physical design of our facilities. Engineers use these drawings in performing daily operations at the plants, and quick access to accurate drawings is especially critical in responding to emergencies. We have embarked on a corporate-wide effort to implement "**intelligent engineering drawings**," transforming our file-based graphical data into information stored in databases. This approach was adopted during the detailed design work on the AFK project, and will be deployed on the Khurais program and the expansion projects at Shaybah and Hawiyah and Yanbu' gas plants.



We operate in very remote areas in the Kingdom, and some of these remote operations are mobile, such as for exploration, drilling and marine activities. The communication needs for these activities can be met only with specialized satellite systems known as **VSATs** (Very Small Aperture Terminals). We have used this technology since 2001, but as our drilling schedule has accelerated, the need for greater high-capacity communications links has grown. To meet this need, we have tripled the amount of bandwidth we lease, raising the total from 72 to 216 megahertz.

The new VSAT system provides robust communications to 300 remote sites and allows higher transmission speeds in support of powerful computing applications such as real-time well log data and remote monitoring of seismic activities.

In addition to our efforts to leverage technology above ground, we are also utilizing technologies below ground as we seek to **maximize ultimate recovery** from our fields.

We are widely recognized as an industry leader in using advanced technology throughout our upstream operations. Today, Intelligent Well technology, geosteering, MRC wells and the revolutionary i-Field or "Intelligent Field" concept are routinely applied in our new crude oil developments.

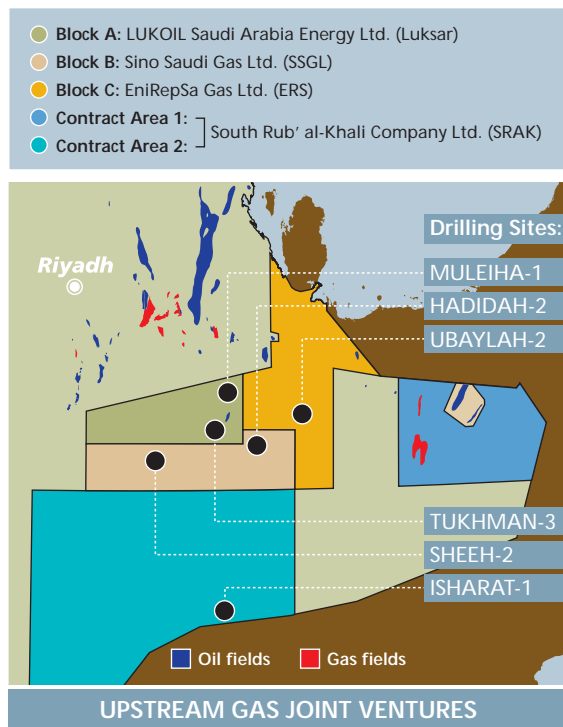
A key indicator of the role improved technology can play in maximizing production is that, for the seventh straight year, we lowered the **aggregate water-cut** in our producing fields to an overall average of less than 25 percent.

Recent advances in **drilling technology** are helping us meet our commitment to increased production — faster, better and at lower cost. For example, modification of the 18-5/8-inch casing point has enabled us to drill a smaller 16-inch hole section in certain reservoirs with a better rate of penetration. Net savings are 15 days of rig time.

... we are  
also utilizing  
**technologies  
below ground**  
as we seek  
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ultimate recovery.



OUR STATE-OF-THE-ART GEOSTEERING OPERATIONS CENTER IS STAFFED ROUND THE CLOCK BY GEOLOGISTS AND ENGINEERS WHO REMOTELY GUIDE DRILLING ACTIVITIES IN REAL TIME.



We expanded the use of **batch drilling** to areas of higher geological uncertainty. Batch drilling involves drilling in succession the same hole section in each well on a given platform, rather than drilling each well individually. Once the same section is drilled in every well on the platform, then the next section is drilled on each well in succession. As each section is drilled, the rig crew learns the characteristics of that section from the first well and applies this knowledge when drilling the same section on subsequent wells.

Batch drilling allows the rig to use the same mud system, bit sizes, drilling tools and casing size for all the wells at one time. This improves drilling efficiency, equipment handling and logistics, saving time and money on expensive offshore drilling operations. Two platforms were batch drilled in the Marjan and Safaniyah offshore fields, with a savings of 36 and 28 days, respectively, per platform. Batch drilling eight platforms in these same areas will result in an estimated savings of \$51 million.

We improved the placement of horizontal and multilateral wells in difficult geologic environments through **geosteering**, using the latest technologies in directional drilling such as Logging-While-Drilling (LWD). Prudent application of this technology is increasing the net footage of wells placed in the reservoir and improving productivity and sweep efficiency. Company geologists and engineers based in our Geosteering Operations Center (GOC) remotely guide drilling activities in real time around the clock to optimize well placement.

We successfully geosteered a water injector well in the South Dome of the Qatif field. The well was drilled to a depth of 27,200 feet (82,910 m) and is considered the longest single horizontal well we have ever drilled. Additionally, 10,500 feet (3,200 m) of slanted horizontal section were drilled — a company record for the longest single horizontal section.

Recent improvements in **logging technology** enhanced our ability to monitor changes in reservoir saturation. A new generation of slim resistivity logging tools can be run through small tubulars and cased wells. In addition, new Nuclear Magnetic Resonance (NMR) tools and applications improved our ability to monitor oil saturation in carbonate reservoirs.

We completed a pilot study to investigate the feasibility of using **micropaleontology** as a tool for **biosteering** coiled-tube wells. In this process, during drilling, we analyze sub-surface samples for micro-fossils to identify stratigraphic layers in the reservoir. Micropaleontological biosteering will be applied in 2007 for horizontal development wells where drilling techniques prevent use of conventional geosteering.

Older fields pose unique challenges — and also offer ample opportunities. A wide range of techniques now help us prolong production and increase recovery from such fields. All appropriate technologies are being brought to bear, such as production equalizing, and expandable tubular and sand-screen technologies to prolong well life, enhance well productivity, optimize drilling and completion, and ensure large-scale and cost-effective deployment.



**TOP:** OUR EXPANDED EXPLORATION PROGRAM REQUIRES EXTENSIVE SEISMIC DATA GATHERING IN SOMETIMES FORMIDABLE TERRAIN. ADVANCES IN SEISMIC ACQUISITION AND PROCESSING, AND IN RESERVOIR CHARACTERIZATION HAVE HELPED BOOST RECOVERY RATES.

**ABOVE:** COMPANY SCIENTISTS IN OUR RESEARCH & DEVELOPMENT CENTER INVESTIGATE A VARIETY OF ISSUES RELATED TO IMPROVING PRODUCTION AND REFINING PROCESSES AND TO LIGHTENING THE ENVIRONMENTAL FOOTPRINT OF THE PETROLEUM INDUSTRY.

## { POWERING THE PLANET, EMPOWERING LIVES ... { IN THE FAR EAST

**What do all people have in common? They are striving to live the best life possible — a life where basic needs are met, where choices are abundant and where dreams are within reach.**

At Saudi Aramco, we understand that millions of people in the Far East depend on us for a steady, reliable supply of the petroleum energy that helps make this life possible.

Urban centers throughout the region are modernizing at a rapid rate. Between 2005 and 2015, regional urban populations are projected to increase by roughly 352 million people. On any given day, many of these people enjoy a quality of life enhanced by petroleum-based products, from the fuel that takes them to work and back home again to the products that make their lives safer, healthier and more pleasurable.





Fueled by a stable supply of hydrocarbons, Asian cities are now more productive than ever before. Many people in the region work in industries such as manufacturing and petrochemicals that rely on petroleum and its derivatives. The automotive industry, for example, makes extensive use of plastics to make cars lighter and more fuel efficient while also making them stronger and safer.

As incomes rise, people increasingly have the ability to purchase a dazzling array of consumer products that stream into the region's ports and cities from around the region and the world, delivered by petroleum-powered ships, aircraft and vehicles.

From food and beverage containers to fiber-reinforced cement to children's toys and home furnishings, plastics make up a substantial segment of consumer and industrial products. Petroleum-based plastics are long-lasting, recyclable, require comparatively little energy to produce compared to processing natural resources, and are more energy efficient to transport.

For the last four years we have been the largest supplier of crude oil to China, India, Japan, The Republic of Korea and Singapore. In 2006, we opened new marketing support offices in Kuala Lumpur, Malaysia, and Shanghai, China, to serve the region better.

Staying ahead of the long-term energy trends in the Far East is just one of the ways we are taking the initiative when it comes to meeting the world's energy challenges.



# THE PRODUCTION CAPACITY CHALLENGE

In recent years, world demand for petroleum has continued to grow, but investments in production and processing capacity and distribution networks have not kept pace, straining world energy markets. Saudi Aramco stands out in this regard — we have **committed ourselves to the largest expansion program in our history.**

By 2009, we will increase our maximum crude oil production capability by some 3 million barrels per day, roughly a 20 percent increase over our current capability.

These new crude oil producing and processing facilities will supply the lighter crude grades most in demand, helping to stabilize global markets and meet growing consumer needs in the mid-term. New production increments envisioned for development after the end of this decade will tap some of the Kingdom's heavier crude reserves.

One of the central components of our expansion is our **drilling program**. At a time when worldwide demand for drilling rigs is at historic highs, we increased our drilling rig count by 26 percent, from 90 to 113 rigs. This total rig count comprised six exploration rigs and 75 development rigs (65 onshore and 10 offshore). In addition, we deployed 32 workover rigs (24 onshore and eight offshore). We drilled 368 new development and 13 exploration wells, and performed 206 re-entries and 136 workovers.

More than 80 percent of all wells drilled in 2006 were horizontal wells with either single or multiple laterals.

Crude oil increment drilling continued throughout the year, including the completion of 73 wells for the Haradh-III increment, 28 of which were MRCs. Drilling for the AFK increment continued with 54 wells. We began drilling for three other crude oil increments in 2006: Khurais, Shaybah and Nuayyim. The Hawiyah gas increment drilling program was initiated, with 32 wells planned.

The **Haradh-III Increment** came on-stream in January 2006, five months ahead of schedule, adding 300,000 bpd of Arabian Light crude oil production capacity to Ghawar, the world's largest oil field, and 140 million scfd of associated gas. Haradh Gas-Oil Separation Plant 3 is the first plant in our Southern Area to have completely automated well control and monitoring, allowing remote operations.

The Haradh-III project benefited from successful integration of four technologies: MRCs; Intelligent Well completions (using control valves for preventing premature water breakthrough); geosteering (for optimal placement of wells in the reservoir for maximum recovery); and the i-Field concept, in which real-time subsurface data transmissions enable continual monitoring of key reservoir indicators.



WE CURRENTLY HAVE HALF A DOZEN MAJOR CRUDE OIL INCREMENTS AT VARIOUS STAGES OF DEVELOPMENT. BY THE END OF 2009, OUR MAXIMUM SUSTAINED PRODUCTION CAPABILITY WILL REACH 12 MILLION BPD.

Average well production rates in Haradh-III are 10,000 bpd, compared with 3,000 and 6,000 bpd for Haradh-I and II, respectively. This is due primarily to the use of MRC wells and the previously mentioned technologies, which slashed unit well development costs threefold. If Haradh-III had been developed with conventional vertical wells, 280 producers would have been required, as opposed to 32 MRCs, as is the present case.

**Khurais**, the fourth largest crude oil field in the world, is the largest integrated project in Saudi Aramco history. This increment, which includes production from Abu Jifan and Mazalij fields, is projected to produce 1.2 million bpd of Arabian Light crude oil by 2009. Associated facilities include dehydration and compression of 450 million scfd of gas, and expansion of Southern Area seawater injection capacity by 4.5 million bpd to support reservoir pressure in the Khurais and Ghawar fields.

In addition, the East/West NGL pipeline capacity will be increased from 425,000 bpd to 555,000 bpd to accommodate increased NGL production. Downstream pipelines for stabilized crude oil, NGL, sour gas and fuel gas will also be constructed.

The **AFK (Abu Hadriyah, Fadhili and Khursaniyah)** Development Project is designed to produce and process 500,000 bpd of Arabian Light crude and 300 million scfd of associated gas by December 2007.

The overall Khursaniyah Development Project, which also includes a grass-roots gas plant in addition to the crude processing facility, is creating a significant impact on the local economy. By the end of 2006, nearly \$500 million in manufactured materials — nearly half of the total — was purchased from local vendors, and more than \$1 billion in engineering services, manufactured items and construction, more than half the total thus far, was obtained in-Kingdom.

We operate **10,668 miles (17,169 km)** of pipeline to transport oil, gas and refined products.



OUR UNPRECEDENTED PROGRAM TO EXPAND OUR CRUDE OIL PRODUCTION CAPACITY REQUIRES THE COLLECTIVE EFFORT OF THOUSANDS OF CONTRACTOR EMPLOYEES, MORE THAN 2,000 OF WHOM ARE SAUDI NATIONALS.

**Shaybah**, located deep in the Rub' al-Khali, has delivered 500,000 bpd of Arabian Extra Light crude oil since 1998. Construction activities have commenced to increase production capacity to 750,000 bpd by late 2008. Major installations include a gas-oil separation plant as well as gas gathering, compression and injection facilities.

**Manifa**, originally discovered in 1957 and produced until 1984 when world demand for crude oil slumped, is the fifth largest crude oil field in the world. We are planning to redevelop the field with new onshore and offshore wells to produce 900,000 bpd of heavy crude oil and 105 million scfd of sour gas.

In collaboration with King Fahd University of Petroleum & Minerals (KFUPM), we conducted studies to determine how best to mitigate the environmental impact of the Manifa project created by the construction of 25 miles (41 km) of causeway and a 1.9 mile (3 km) bridge to support 27 drilling islands in the shallow waters of the Arabian Gulf. There will also be 11 offshore platforms for deeper water producing and injection wells.

Onshore facilities for the Manifa project will include nine drill sites, a central oil and gas processing facility, water supply wells and injection facilities, and multiple gathering, water injection and product distribution pipelines. Drilling is set to begin by the end of 2009, and the increment is scheduled to come on-stream by mid-2011.

**Nuayyim**, a field in central Saudi Arabia, is slated to add 100,000 bpd of Arabian Super Light crude oil by 2008. Construction will commence on the grass-roots production facilities in 2007.

We also commissioned and began operations at four third-party **cogeneration plants**, located at 'Uthmaniyah, Shedgum and Ju'aymah gas plants and Ras Tanura Refinery. The cogen plants will produce 1,050 megawatts of electrical power for the gas plants and refinery, and harness exhaust from the power stations to produce 4.4 million pounds per day of high pressure steam.

Managing mega-projects involves much more than engineering and construction: We are enhancing various project management processes, such as standardizing procurement processes and equipment designs, increasing the productivity of local design and construction contractors, and leveraging capital program data for improved planning. We are also fast-tracking our contracting, design and purchasing activities.

In addition to our work on the current roster of mega-projects, we also accomplished an impressive string of other major projects.

One example is a group of **Maintain Potential** projects. These projects are designed to ensure that we meet our commitment to the world's energy needs by maintaining our targeted maximum sustained production capability.

In 2006, we connected 237 new oil and water wells onshore, increasing oil production capacity by more than 1 million bpd. We also connected 23 new gas wells, increasing gas production by 500 million scfd to supply Ghawar-area gas plants.

Offshore, 23 new platforms were installed and 38 new wells were connected. To support increased drilling activities, 11 drilling support jackets were fabricated and installed in only 11 months, in contrast to a normal 18-22 month schedule.

Work continued in the offshore **Safaniyah** field to install 42 electrical submersible pumps to boost production by 150,000 bpd. The project also involves installation of a 3,000-ton tie-in platform and the upgrade of seven existing platforms by early 2007.

In conjunction with our projects to increase crude oil production capacity, we are expanding our **distribution network**.





**TOP:** THE TOWERING SAND DUNES OF THE RUB' AL-KHALI, OR EMPTY QUARTER, RISE FROM THE FLAT SURFACE OF A *SABKHA*, OR SALT FLAT, THE FUTURE SITE OF A GAS-OIL SEPARATION PLANT THAT WILL ADD 250,000 BPD OF ARABIAN EXTRA LIGHT CRUDE OIL PRODUCTION CAPACITY TO OUR SHAYBAH FACILITY.

**ABOVE:** THE CENTRAL CONTROL ROOM OF THE KHURSANIYAH DEVELOPMENT PROGRAM TAKES SHAPE IN THE DESERT NORTHWEST OF DHAHRAN. THE PROJECT, WHICH WILL GATHER OIL FROM THE ABU HADRIYA, FADHILI AND KHURSANIYAH FIELDS, ALSO INCLUDES A GRASS-ROOTS GAS PLANT.



We operate 10,668 miles (17,169 km) of pipeline to transport oil, gas and refined products from production plants to downstream processing plants, export terminals and refineries. The Pipeline Integrity Management program continues to be a critical success factor in ensuring the reliability of our pipeline network.

More than 1,800 miles (3,000 km) of pipeline were inspected in-line with high-resolution instrument-scraping technologies. This ongoing inspection program provides essential data for pipeline repair and rehabilitation programs.

We commissioned the Pipeline Monitoring Center to ensure smooth, efficient management of the pipeline network. This center is the collection point for critical data, transferred from across the entire network.

Driven in part by our slate of mega-projects, the pipeline network is growing rapidly, with more than 1,400 miles (2,300 km) of new pipeline forecast.

In 2007, we will begin the **Khurais Downstream Pipeline** project, which involves laying six pipelines for stabilized crude, NGL, sour gas and fuel gas to support the Khurais increment. We also plan to expand the **Shaybah-Abqaiq Pipeline** capacity to 750,000 bpd in support of the Shaybah crude oil expansion project.

In 2006, **Vela International Marine Limited**, our wholly owned shipping subsidiary, completed more than 1,000 voyages, transporting roughly 1.8 million bpd of crude oil to customers in the United States and Europe. The domestic fleet carried more than half a million bpd of crude oil and refined products between Kingdom ports.

During 2006, Vela took delivery of two new product tankers, the *Altarf Star* and *Zaurak Star*. The tankers are each 49,000 deadweight tons, 656 feet (200 m) long and capable of carrying roughly 348,000 barrels of refined products. Vela also signed contracts with a shipbuilding yard in the Republic of Korea to build six new double-hull VLCCs (Very Large Crude Carriers) to be delivered between 2008 and 2009. In addition, four additional double-hull VLCCs will also be built.



THE ALTARF STAR AND THE ZAURAK STAR PRODUCT TANKERS ARE THE NEWEST ADDITIONS TO VELA'S FLEET.

In recognition of Vela's work in developing Saudi seaman's documentation consistent with the International Maritime Organization's globally recognized "White List" requirements, Vela received the first six Saudi seagoing seaman's books issued by the Saudi Ministry of Transport. Two young Saudi captains earned their Class 1 Master Mariner Certificates, one of the highest qualifications in the maritime industry.

The U.S. Coast Guard notified Vela that the company achieved the prestigious "Quality Shipping for 21st Century" designation for all 19 of its VLCC vessels. This is a designation received by less than 10 percent of the foreign-flagged ships operating in the United States. In addition, 17 Vela vessels received awards from the U.S. Coast Guard for their Automated Merchant Vessel Reporting system.

## { POWERING THE PLANET, EMPOWERING LIVES ... IN SAUDI ARABIA

**We have been meeting the energy needs of the world for nearly three-quarters of a century, but perhaps more importantly, we have been fueling the development of the Kingdom of Saudi Arabia for just as long.**

In our early years, we made significant contributions to the health and welfare of the Saudi people by building schools, hospitals and roads. We led the way in eradicating malaria in the Eastern Province and assisted in the growth of grass-roots service and manufacturing industries.

In recent decades, as both the company and the country have become more global in outlook and reach, our strategy to develop the domestic economy has evolved.

Today, our role at home is to leverage the Kingdom's hydrocarbon reserves to benefit its people and expand the economy.

We have been working to enhance the domestic private





sector's competitive ability to provide an increasing amount of local content in all our projects, big and small. These projects produce a multiplier effect on the domestic economy, stimulating associated industries and creating jobs.

Opportunities abound in fields such as project engineering and construction, oilfield services, and material and equipment manufacturing — not only for the Kingdom's petroleum industry but for the whole region.

In 2006, we executed 2,000 contract actions valued at approximately \$16 billion, most of which were awarded to fully Saudi-owned or joint-venture companies.

Two seamless pipe and OCTG (oil country tubular goods) projects, with a total investment of around \$750 million, are examples of how our recent capital expansion program — and our long history of fostering the development of local expertise — are currently benefiting the local economy. These projects are anticipated to commence operations in 2008 and create about 1,100 new jobs.

On the Kingdom's west coast, three new steel fabrication plants with a total capacity of 175,000 metric tons per year of process and offshore equipment are under construction, with start-ups targeted in 2007 and 2008. With a total investment of \$130 million, these plants are expected to create another 2,000 jobs.

We also have concluded three five-year manufacturing agreements for the local manufacturing and inventory management of wellhead equipment valued at more than \$500 million. As a result, 260 drilling wellhead items that were previously imported from overseas are now expected to be produced locally and economically, with the potential to export the items to other countries in the region.

At Saudi Aramco, we not only take great pride in looking back at our legacy to our Saudi people, we also are proud of the legacy we are building now, for future generations.

# THE DOWNSTREAM CHALLENGE

The petroleum industry has seen tighter capacities all along the oil supply chain, resulting in a smaller margin for error and a curtailed ability to make up for supply disruptions and shortfalls, which in turn have led to greater price volatility.

Although oil prices moderated at the end of 2006, the long-term demand trend will continue to rise, meaning refining capacities matched to crude oil grades will need to increase accordingly to support continued global economic growth. Increased demand for natural gas is also placing strains on the industry.

Tight capacity is particularly apparent downstream, where there is a sizable mismatch between available crude oil supplies and existing refinery configurations. This gap is forecast to widen unless there are appropriate investments in optimal refining systems, since future crude supplies are going to be heavier and more sour, while the slate of refined products will continue to grow whiter and lighter with more demanding specifications.

Saudi Aramco is taking the initiative to respond to market needs through a systematic program of strategic investments all along the petroleum value chain to help meet future global energy demand while simultaneously growing the Kingdom's economy.

Currently, we have more than 3.5 million bpd of **refining capacity** evenly split among Saudi Arabian and international markets. We are studying the possibility over the next five years of working with a range of partners to expand that capacity by nearly 50 percent, to almost 6 million bpd. A crucial difference is that much of this capacity will be able to process heavy, sour crude,

helping alleviate the worldwide mismatch between crude quality and refinery configurations.

All told, we are considering scenarios to build close to 2 million bpd of additional refining capacity domestically and around the world, meaning we may be engaged in roughly one quarter of the announced plans for refinery capacity increases worldwide.

In May, we signed separate Memoranda of Understanding with ConocoPhillips and Total for development of 400,000 bpd **export refineries** in Yanbu' and Jubail, respectively. The projects are part of the Kingdom's strategy to address growing global energy demands, attract foreign investment, create profitable businesses and provide increased job opportunities for Saudis. These refineries will be designed to refine heavy, sour crude into high-quality, low-sulfur products that meet current and future U.S. and European specifications.

Comprehensive studies to confirm the capital and operating costs of both refineries are being conducted, with completion expected at the end of 2007. Upon completion of these studies, it is anticipated that a joint venture company will be established with each partner. At an appropriate time, and subject to regulatory approvals, an ownership interest in these joint venture companies will be offered to the public. The targeted start-up for the proposed refineries is the second half of 2011.





OUR SLATE OF MEGA-PROJECTS IS NOT LIMITED TO INCREASING CRUDE OIL PRODUCTION CAPACITY. WE ARE ALSO ADDING GAS AND NGL PROCESSING CAPACITY AT HOME AND DEVELOPING A STRATEGY TO TRANSFORM OUR CONVENTIONAL REFINERIES INTO PETROCHEMICAL MANUFACTURING CENTERS. IN ADDITION, WE ARE WORKING ON A PROPOSED REFINING, PETROCHEMICAL AND MARKETING PROJECT IN CHINA.

A proposed project with ExxonMobil and Fujian Petrochemical Company Ltd. to triple the existing crude capacity of the Fujian refinery in China is well under way. The preliminary engineering associated with the physical infrastructure of the **Fujian Integrated Project** was completed, and the engineering, procurement and construction phase initiated.

The project, targeted for completion in early 2009, will increase capacity from 80,000 to 240,000 bpd and also add a petrochemical complex to the refinery. The resulting petroleum products will be sold mainly through a marketing joint venture between Saudi Aramco Sino Company Limited (SASCO) (a wholly-owned subsidiary of Saudi Aramco), ExxonMobil and Sinopec.

Our affiliate **Petron**, the leading oil refining and marketing company in the Philippines, undertook a number of initiatives in the past year to upgrade and expand its facilities, including constructing a new Petro FCC unit to produce more high-value white products and propylene. A unit to produce other petrochemicals (benzene and toluene) is also in the works, with both units expected to be commissioned in early 2008.

**S-Oil Corporation**, our affiliate in South Korea, marked its 30th anniversary this year. For the third time and the second year in a row, S-Oil was named the top company in the Korea refining sector by the Korea CEO Association.

Domestically, we completed initiatives to maximize revenues at our refineries, including increasing **Ras Tanura Refinery** diesel production and exporting atmospheric gas oil. Additionally, we performed product-optimization activities to maximize higher-value products at **Riyadh, Jiddah, Rabigh** and **Yanbu'** refineries.

As noted elsewhere, Ras Tanura Refinery's third-party cogeneration plant came on-stream, eliminating the need to upgrade or expand the refinery's in-house electric power generating facilities and also reducing in-house steam generation requirements.

The American Association for Laboratory Accreditation awarded **Ras Tanura Refinery Laboratory** ISO 17025-

2005 quality system accreditation, making it the first Saudi Aramco lab to achieve this recognition.

Four major capital projects were completed at **Yanbu' Refinery**: continuous catalyst regeneration (CCR) platformer, light straight-run naphtha isomerization unit, diesel hydrotreater (DHT) and laboratory building replacement. The CCR platformer and isomerization unit added 20,000 bpd of gasoline production, while the DHT complex improved air quality by reducing the sulfur content in diesel fuel.

In August, **Riyadh Refinery** also commissioned a new diesel hydrotreater to reduce the sulfur content in diesel. Preliminary design work started in October on a diesel hydrotreater project at Ras Tanura Refinery.

We added, for domestic sale, a 91-octane gasoline grade in addition to our current 95-octane grade. The **new grade of gasoline** was targeted for launch on January 1, 2007. To achieve this target, we conducted an extensive program to develop and modernize various facilities, including refineries, pipelines and tankers, and the 18 company bulk plants that handle gasoline.

We are also boosting our production of **natural gas** and expanding our **Master Gas System (MGS)** to meet growing domestic demand from utilities and a thriving industrial sector.

For some three decades, we have operated the MGS, the largest integrated gas gathering, processing and distribution system of its kind. The MGS is the backbone of Saudi Arabia's economic development and diversification, and has the capacity to process more than 9 billion scfd of gas and deliver more than 7 billion scfd of net sales gas.

**Hawiyah NGL Recovery Plant**, scheduled to come on-stream in fourth quarter 2007, will process nearly 4 billion scfd of sales gas from the Hawiyah and Haradh gas plants to yield 318,000 bpd of NGL. The facility will supply feedstock for forthcoming petrochemical complexes in the Eastern and Western provinces.

Construction progress reached the halfway point by year's end. Total manpower on the project will expand from the current 10,000 at year's end to a peak of 14,000 in early 2007. The project team has focused on purchasing equipment from local contractors, including awarding the low-temperature carbon steel vessel fabrication to an in-Kingdom company for the first time.

Detailed engineering design is progressing to increase the overall fractionation capacity at **Yanbu' NGL Plant** from 390,000 bpd to 585,000 bpd. This project is due to be commissioned in December 2008. The capacity of the **East-West NGL Pipeline** will be increased by December 2009 to utilize fully the plant's increased fractionation capacity.

A new de-ethanizer column will be installed in **Yanbu' Gas Plant** to increase ethane and NGL processing by 185,000 bpd, helping meet the growing demand for feedstock supply for the burgeoning petrochemical industries in Yanbu' and Rabigh. The column is scheduled to be commissioned in December 2008.

**Khursaniyah Gas Plant** will come on-stream in December 2007 and is designed to process 1 billion scfd of associated gas to produce 550 million scfd of sales gas and 290,000 bpd of ethane, plus NGL. The gas feed to Khursaniyah Gas Plant will include associated gas from crude production at the Khursaniyah increment and other adjacent fields.

To help meet our aggressive deadline, we are fabricating 11 large vessels on site, including six NGL storage tanks 230 feet (70 m) tall by 22 feet (6.6 m) in diameter, and weighing 1,100 tons each. We are already in the planning stage to nearly double the capacity of the gas plant to process non-associated gas recently discovered at the offshore Karan field in a new, separate unit.

The project to expand fractionation capacity at **Ju'aymah Gas Plant** by 50 percent is on schedule to be completed in first quarter 2008. The plant's new module is designed to fractionate ethane and NGL streams from Hawiyah NGL Recovery Plant and Khursaniyah Gas Plant.

... a program of investments all along the petroleum value chain to help meet **future global energy demand.**



WE, OR ONE OF OUR AFFILIATES, HOLD STAKES IN REFINING AND MARKETING ENTERPRISES IN JAPAN, THE REPUBLIC OF KOREA, THE PHILIPPINES AND THE UNITED STATES. A SIMILAR ARRANGEMENT IS IN DEVELOPMENT IN CHINA.

**Hawiyah Gas Plant** will be expanded by 50 percent to process more non-associated gas. The gas-processing capacity will rise from 1.6 billion to 2.4 billion scfd. This project constitutes the final phase of the Hawiyah NGL Recovery program and is scheduled to be completed in July 2008.

As part of the project to increase Shaybah's crude oil production capacity, the **Shaybah Gas Compression Upgrade Project** was commissioned in early 2006 to handle the increasing Gas Oil Ratio (GOR) associated with the crude to eliminate gas flaring while maintaining maximum crude production. The project added a capacity of 200 million scfd of gas compression to the facility.

We are charting new territory for ourselves and our industry in the region through our strategy to **transform our conventional refineries into petrochemical manufacturing centers** to serve as hubs for new industrial clusters. This strategy will contribute to Saudi Arabia's continued industrialization and job creation. These industrial clusters will use the refineries' petrochemical feedstocks to manufacture plastics, high-performance materials, and other value-added goods and products for export.



THE HAWIYAH NGL RECOVERY PLANT WILL RECOVER ETHANE AND PROPANE FROM SALES GAS TO INCREASE THE KINGDOM'S SUPPLY OF PETROCHEMICAL FEEDSTOCK.

Saudi Aramco's first foray into this area is our joint venture with Sumitomo Chemical Co. of Japan to develop our Rabigh Refinery into an integrated refining and petrochemical complex.

Ground was broken on the **PetroRabigh** project in March, and construction is under way. In October, one of the heaviest lift ships in the world delivered two 1,000-ton polyethylene reactor columns, which were unloaded onto special multi-wheeled trailers for delivery to the site. Once completed in 2008, the PetroRabigh facility will produce about 2.5 million tons of petrochemical derivatives annually, in addition to high quality fuels.

We are currently negotiating with Dow Chemical Company as a potential partner in a joint venture to construct, own and operate a world-scale **chemicals and plastics production complex integrated with our Ras Tanura Refinery**. When fully operational, the new petrochemical complex will be one of the largest plastics and chemicals production facilities in the world, well-situated to access most major world markets.

The proposed petrochemical complex will produce an extensive and diversified slate of chemicals, operate profitably and introduce new value chains and specialty products to the Kingdom. This, in turn, will help spur development of downstream conversion industries, further diversifying the domestic economy and generating job opportunities for Saudis. The anticipated project start-up date is 2012.

Direct investment in the Kingdom's petrochemical industry during the next five years is expected to be significant. These investments target not just the production of basic commodity products, but also specialty and downstream products that are more labor intensive.

This latest chapter in Saudi Aramco's transformation from a production powerhouse to a fully integrated, international energy enterprise is further evidence of the Kingdom's efforts to leverage its resources to strengthen and diversify its economy.





**TOP & ABOVE:** GIANT COMPONENTS OF THE PETRORABIGH JOINT VENTURE PROJECT ARRIVE BY SHIP AND ARE TRANSPORTED TO THE NEARBY CONSTRUCTION SITE ON MULTI-WHEELED VEHICLES. THE FACILITY, WHEN COMPLETED, IS DESIGNED TO PRODUCE APPROXIMATELY 1.3 MILLION TONS OF ETHYLENE AND 900,000 TONS OF PROPYLENE PER YEAR, PLUS 60,000 BPD OF GASOLINE. PETROCHEMICAL UNITS WILL CONVERT ALL OF THE OLEFIN PRODUCTION TO DOWNSTREAM PRODUCTS.

## { POWERING THE PLANET, EMPOWERING LIVES ... { IN THE UNITED STATES

**America is a nation of people who are going places. They go to work, school, baseball practice, vacation destinations and grandma's house for the holidays. A healthy U.S. transportation industry puts these places within easy and affordable reach.**

Saudi Aramco helps provide America with the energy it needs to transform the productivity of its people into the strongest economy in the world.

One of the keys to competing in the global marketplace is transportation. Safe, efficient transportation systems are essential to America's continued economic vitality and the quality of life enjoyed by its people. From jet fuel, gasoline and diesel to the petroleum-based plastics used in the manufacture of automobiles and airplanes, we help supply the United States with the crude oil that propels commercial and cultural relations on a global scale.





In 2005, the transportation sector grew more than any other sector of the U.S. economy. As U.S. businesses experience growth and household incomes rise, travel and trade increase correspondingly.

Travel and trade aren't the only benefits of a robust transportation industry. In 2005, the transportation sector alone employed more than 5 million people in occupations ranging from pilots and air traffic controllers to auto parts retailers and mechanics.

In this age of globalization and freer trade, America and Saudi Aramco enjoy an association that extends beyond petroleum.

Our long-standing relationship is founded on the healthy and stabilizing market principle of interdependence.

The United States economy counts on us to maintain a reliable supply of crude oil and, to a lesser extent, refined products and NGL. In turn, we rely on U.S. firms for oil field services, industrial equipment, IT hardware and software, and advanced technological tools.

At any given time, hundreds of our Saudi employees are studying in U.S. universities and colleges, gaining the skills and international experience needed to lead the company in the years to come.

While we look ahead, we also remember our past. At Saudi Aramco, we value our long history of cooperation with the United States. This is why we intend to remain one of America's top suppliers of petroleum for decades to come and why the United States will continue to be a country on the move.

# THE HUMAN RESOURCES CHALLENGE

Achieving our commitment to meet the world's energy needs is possible only through the **dedicated efforts of our people**. We continue to build on our legacy of success by investing in our people and sharing our expertise with local companies, educational institutions and other domestic stakeholders.

As our industry grows more complex, as Saudi Aramco branches out into new areas, and as the technologies we employ become more sophisticated, the need increases for well-trained, highly skilled professionals who can develop, deploy, adapt and improve on that technology. Furthermore, the long-term vitality of the Saudi economy depends on cultivation of a highly skilled workforce.

Our approach to the long-term challenge of talent development has a new dimension. In July, King 'Abd Allah entrusted Saudi Aramco with spearheading creation of a new, world-class, research-oriented science and technology university in the Kingdom. This institution, the **King 'Abd Allah University of Science and Technology**, will not only produce future leaders in scientific and technological fields, but also strengthen the country's research and technology capabilities.

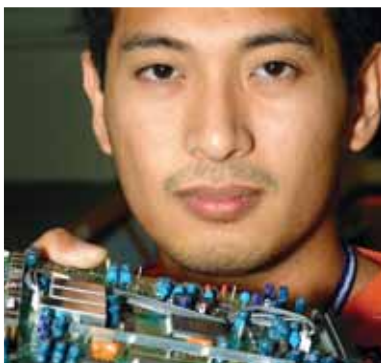
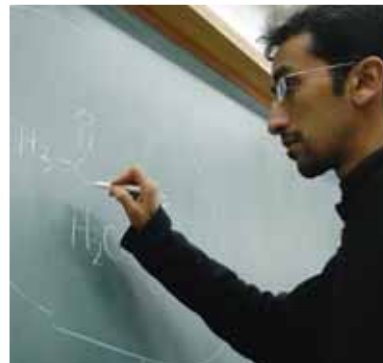
Environmental studies have been completed and the preliminary campus design defined. The university's charter and an interim organizational structure have been created. The university will be built on the Red Sea Coast, near Rabigh, and is scheduled to convene its first classes in the fall semester of 2009.

In today's business environment, we need not only good engineers and skilled technicians, we also need people with highly developed "soft" skills, who can build and lead cross-cultural teams, manage complex initiatives, identify new business opportunities and emerging economic trends, and who are equally at home working in Yokohama or Yanbu'.

As an enterprise whose operations impact the lives of billions of people around the world, it is imperative that we identify and groom a **new generation of leadership**. Each year, managers and division heads apply a rigorous assessment procedure to identify high-potential individuals. This process complements our Corporate, Management and Supervisor Assessment Centers, run by independent experts, where the leadership potential of candidates is tested through a series of demanding simulations. More than 2,250 participants have undergone assessment through these centers.

We also conduct a number of leadership development programs, including the Saudi Aramco Management Development Seminar. In addition, promising individuals are sent to high-level executive programs offered by leading universities around the world.





OUR WORKFORCE, NEARLY 52,000 STRONG, IS 87 PERCENT SAUDI WITH ROUGHLY 50 NATIONALITIES REPRESENTED IN THE REMAINDER. WE HAVE A RICH LEGACY OF TRAINING AND EDUCATION, AND TODAY, ALL EMPLOYEES BENEFIT FROM A WIDE ARRAY OF LEARNING OPPORTUNITIES.



OUR PEOPLE PLAY A CENTRAL ROLE IN MAINTAINING OUR REPUTATION FOR MEETING OUR COMMITMENTS AT HOME AND AROUND THE WORLD.

Two new leadership development programs are the Economics of Oil and the Business Acumen Program. In the former, conducted in partnership with our Saudi Petroleum Overseas Ltd. affiliate in London, participants study the fundamental drivers of global crude oil trade and how these forces might impact Saudi Aramco. The latter program is designed to enhance a broad portfolio of business and financial skills.

Our management and supervisory training programs attracted more than 9,700 enrollments, including roughly 1,200 enrollments in Operational Excellence programs and 500 in Competencies Development and Orientation programs. We conducted five Saudi Aramco Leadership Forum (SALF) sessions for approximately 80 participants, and also held 13 SALF learning seminars for 660 participants. The SALF Annual Forum attracted 125 SALF alumni and management participants.

A key strategy in preparing our workforce for the future is self-development. A prime component of this is **e-Learning**. At the end of 2006, our e-Learning site had more than 2,500 courses, nearly double the total in 2005. Approximately 35,300 employees enrolled in at least one e-Learning course during the year, an increase of 37 percent over 2005. More than 4,000 oil and gas operators are benefiting from access to a web-based Operator Training Simulation program.

## OTHER TRAINING PROGRAMS

- We drew upon more than 2,100 trainers and support staff to develop, direct and conduct training programs. Recipients included 2,739 people in developmental positions; 6,390 participants in non-employee programs; and 1,030 full-time Saudi employees in academic, job skills, supervisory and on-the-job programs.

- We offer a mix of educational and training opportunities in and outside the Kingdom, including advanced degrees, work assignments around the world, two-year technical degrees, short-term technical training and advanced medical and dental degrees. More than 280 employees were enrolled in these programs in 2006.

- Our College Preparatory Program assists Saudi students in gaining admission to universities and enhances their study skills. In 2006, 300 students successfully completed this program. And, for the first time, 60 Saudi females were admitted to the program.

- Our Apprenticeship Program offers eligible Saudi high school and vocational college graduates the opportunity to receive training in technical, craft, operator, services and clerical career tracks. In 2006, we recruited 3,015 new apprentices, including 184 graduates from vocational colleges. At year-end, the Apprenticeship Program had more than 5,000 enrollees.

- Every summer, we conduct outreach programs for high school and university students in the Kingdom. At company training centers around the Kingdom, participants attend classes in English, computers, job skills, and health and safety. In 2006, 736 college students (222 females and 514 males) participated.

- Our Marine organization worked with a local contractor to provide certified courses for young Saudi contract employees to work in the offshore sector.



**TOP:** MANAGING MEGA-PROJECTS HAS BECOME A CORE COMPETENCY AT SAUDI ARAMCO.

**ABOVE:** WE OFFER TRAINING AND EDUCATION NOT ONLY TO CURRENT EMPLOYEES, BUT ALSO TO POTENTIAL EMPLOYEES IN THE KINGDOM THROUGH OUR APPRENTICESHIP, SUMMER OUTREACH AND GIFTED STUDENT PROGRAMS. WE ALSO PARTNER WITH THE SAUDI GOVERNMENT AND PRIVATE SECTOR PROGRAMS IN A NUMBER OF INITIATIVES.



## { POWERING THE PLANET, EMPOWERING LIVES ... IN EUROPE

**The major advances in human health over the last half century, in Europe as well as the rest of the world, have been made possible in large part with products and medicines with a petroleum base.**

Not only is advanced health care a major indicator of the quality of life, the manufacture and distribution of health-care products — both of which rely on a reliable supply of petroleum — are a major source of economic well-being. Western Europe is a close second to North America in the production of ethylene and propylene, and a major producer of benzene.

Petrochemical producers in Europe count on Saudi Aramco to help meet demand. In 2006, 15 percent of both our crude oil exports and refined product exports were destined for Europe and the Mediterranean region, as was more than 8 percent of our NGL exports.





Petroleum finds its way into a wide variety of products that help people live longer, better lives. Examples include plastics in hip joints, artificial limbs, heart valves, gloves, hoses and tubes, catheters, syringes, blood and vaccine bags, splints, transdermal patches and oxygen masks.

Medical technology is making rapid advances, helped in part by the more sophisticated use of plastics. For example, miniature spiral-shaped implants made of plastic can be positioned in blocked arteries. The implant is charged with active substances that release over time and gradually break down the blockage. Eventually the support itself dissolves.

Diabetes is a major public health issue that affects 60 million Europeans. It is the fourth leading cause of death in Europe and is a risk factor for many other diseases. People who live with diabetes get help controlling the disease through the use of insulin pumps that dispense a steady and adjustable supply of insulin, resulting in a more accurate dose than can be achieved by injections. These pumps incorporate plastic parts, including a flexible plastic needle that is more comfortable for the patient than traditional needles.

Petrochemicals are also used as building blocks in an array of medicines, including antibacterials, antihistamines, analgesics, antibiotics and

sedatives, and in the pill coating that releases the medication in measured doses in addition to making the pills easier to swallow.

At Saudi Aramco, we understand that the petroleum we export helps power the sophisticated petrochemical industry in Europe, and that millions of people rely on this industry for the economic and quality of life benefits it brings.

# THE COMMUNITY CHALLENGE

All efforts to meet the challenges posed by growing energy demand may be for naught unless there is a corresponding commitment to lighten the environmental footprint of our industry's activities and products. Intensive efforts must also be made to ensure that facilities and communities are safe, healthful places in which to work and live.

We share the world's concern regarding potential climate change impact, and we are working to play a leading role in developing and implementing technological solutions in a responsible manner. In May, we organized an international symposium on carbon management — the first of its kind in the Middle East.

As part of Saudi Aramco's broader technology program, we are collaborating with a number of leading research institutes and technology developers worldwide to introduce new environmental technologies, such as carbon capture and sequestration, cleaner burning fuels, more environmentally friendly engine designs, and new flue gas and crude desulfurization technologies.

In addition to our efforts in energy conservation and flare reduction, we have established a dedicated **Carbon Management Team** focused on coordinating our efforts to minimize carbon emissions.

As our offshore activities have increased, so has our ability to combat oil spills. Saudi Aramco maintains a large, dedicated anti-pollution fleet and regularly conducts international oil spill drills in cooperation with other company organizations, government agencies and international environmental organizations.

**Sulfur plant upgrades** at Shedgum and 'Uthmaniyah gas plants were completed in late 2005 and commissioned in early 2006, significantly reducing sulfur emissions. Further reductions will be achieved in a second phase of projects for both plants, planned for completion in 2009. A similar project has begun at Berri Gas Plant. As mentioned earlier, the diesel hydrotreaters at Yanbu' and Riyadh refineries have reduced atmospheric sulfur dioxide emissions from diesel fuel by about 70 percent.

A number of **wastewater treatment** plants are in the works or planned for the near future, including facilities at the Ras Tanura and Ju'aymah terminals, Abqaiq Plants, East/West Pipeline pump stations, regional distribution centers, Berri and Ju'aymah gas plants, Jiddah Refinery and onshore and offshore locations in our Northern Area.

We place great importance on securing our facilities — and more importantly, our people — from harm. Company operations and communities are protected by an array of safety and security measures. Our Security personnel are well-trained and participate in frequent exercises. Furthermore, our facilities feature redundant systems so production, processing and distribution of petroleum can continue unabated.



IT IS NO ACCIDENT THAT OUR COMPANY COMMUNITIES ARE SAFE, ATTRACTIVE AND ENJOYABLE PLACES TO LIVE AND WORK — IT IS A MATTER OF PRIDE. WE ARE ALSO ACTIVE IN OUR LOCAL COMMUNITIES THROUGH OUTREACH ACTIVITIES SUCH AS OUR FLEET OF MOBILE LIBRARIES, BEACH AND DESERT CLEAN-UPS, TRAFFIC SAFETY AND RECYCLING PROGRAMS, AND OTHERS.



We also work cooperatively with Saudi government security forces to help ensure we keep our commitment to being the world's most reliable supplier of petroleum.

Our IT organization initiated a number of projects that provide proactive capabilities to ensure data and systems protection, such as intrusion detection and prevention systems, and anti-virus and anti-spyware. We rolled out a new **e-Security** system that serves more than 220,000 customers around the Kingdom, reducing the lead and cycle time of ID and sticker issuance by more than 90 percent.

We conducted information technology (IT) **security awareness campaigns** for 169 plants around the Kingdom, and completed IT security risk assessments for 10 major facilities. Safety risk assessment studies were carried out for a number of existing facilities and major expansion projects, including Shedgum and Yanbu' gas plants, the Nuayyim crude increment and various Master Gas System expansion projects.

We have upgraded the **Dhahran Emergency Control Center** so our Fire Protection Department can better monitor and respond to potential disasters around the Kingdom. The center uses both land-based and satellite-based telephone and data communication systems, satellite imagery, vehicle tracking and GIS software, plus other crisis management tools.

We operate one of the largest fixed-wing and helicopter fleets in the industry, and to protect this critical asset, we obtained eight **Rapid Intervention Aircraft Rescue and Fire Fighting trucks**. The trucks meet National Fire Protection Association (NFPA) 414 standards, are fast, tough and nimble, and can operate in a variety of terrains and conditions. Water, foam or dry chemical solutions can be discharged from remote-controlled turrets on the roof and bumper. The vehicles are also equipped with infrared cameras for operating at night or in poor visibility.

We are not only creating initiatives to grow the Kingdom's economy, we take a leading role in improving quality of life as well. We participated in two major

... Saudi Aramco is ranked the **No.1** oil company in the world.



**TOP & ABOVE:** EMPLOYEES AND THEIR FAMILIES ENJOY ACTIVE LIFESTYLES AND HAVE A WEALTH OF EDUCATIONAL, RECREATIONAL AND SOCIAL OPPORTUNITIES FROM WHICH TO CHOOSE.



**traffic safety campaigns** in 2006. For the 22nd consecutive year, we participated in the Gulf Cooperation Council (GCC) Traffic Week, distributing printed materials, taking part in exhibitions organized by traffic authorities and conducting presentations in local schools. We also took part in a month-long traffic safety campaign organized by the Ministry of the Interior.

We worked closely with the Eastern Province Municipality in launching a **recycling program** for plastic, glass and aluminum in the Al-Dana residential area, part of greater al-Khobar. The same program is in effect in our Dhahran community. A local factory manufactures the recycling bins, eliminating the need to import them and reducing the cost by half.

For more than five decades, Saudi Aramco has provided subsidized home loans to eligible Saudi employees through our **Home Ownership Program**. In 2006, we granted 1,729 new home loans, bringing the total of homes that have been financed to more than 54,700.

Our commitment to the education of the children of our Saudi employees, and to children of the Kingdom at large, dates back to the 1950s. Since then, we have constructed 139 government **schools** (74 for boys and 65 for girls) and have also provided maintenance and renovation programs.

We also organized a three-day **School Kit Campaign** for families in need in Jaizan and Tabuk, and more than 2,300 kits were distributed. Company employees donated funds that helped provide more than 3,500 school kits for children in the Eastern Province.

The children of our expatriate employees are provided with top quality education at company-operated schools. In 2006, all five Saudi Aramco Schools were awarded accreditation by the Middle States Association of Colleges and Schools.

**Saudi Aramco Medical Services Organization (SAMSO)** provides world-class medical and dental care to our employees and their dependents.



ENVIRONMENTAL EDUCATION STARTS EARLY, WITH EMPLOYEES AND THEIR FAMILIES PLANTING MANGROVE SEEDLINGS ALONG GULF COAST BEACHES.

In 2006, we added cardiac surgery and improved services such as interventional cardiology, and neurosurgery. We also enhanced our emergency medical disaster response capability in Abqaiq and 'Udhailiyah, and upgraded the level of care offered by local clinics in these areas.

A series of Network Development initiatives in al-Hasa improved access to health care, reduced waiting times, expanded bed capacity to more than 600 and increased available physician specialties tenfold.

Our Diabetes Prevention program staged promotional campaigns in 25 company locations, and more than 12,000 employees attended. We implemented smoking cessation and workplace wellness programs that focused on healthy habits, diet and exercise.

For the 18th year in a row, *Petroleum Intelligence Weekly* ranked Saudi Aramco as the No. 1 oil company in the world. We like to think the honor is bestowed not only for our petroleum reserves and production capabilities, but also for our bold actions to meet the growing challenges facing our industry and our world.

## { POWERING THE PLANET, EMPOWERING LIVES ... { IN ASIA

### Farmers in India and across the Far East are literally reaping the benefits of petroleum.

Since the Industrial Revolution, countries that have grown wealthy are those that increased food production and, at the same time, reduced the labor force employed in agricultural industries. A major factor driving this development — past, present and future — is the harnessing of petroleum energy.

Thanks in part to petroleum-based plastics, ranging from drip hoses and irrigation pipes to packing materials and irrigation pumps, regional agriculture production increased by 62 percent between 1990 and 2002.



These and other innovations have reduced the quantity of labor required in irrigated rice cultivation from 57.5 person-days per hectare in 1987 to just eight person-days per hectare in 1998 — a decline of 86 percent in just over a decade.

Inorganic fertilizers derived from petroleum contribute to lowering the per-ton cost of growing food. They are less expensive to produce and apply than organic fertilizers, and they produce higher crop yields.

Petroleum enables farmers to produce more food with less effort. In fact, the amount of energy needed to produce a unit of food has been steadily declining throughout the region.

This is good news for farmers and consumers alike because lower production costs allow farmers to increase profits while consumers benefit from lower prices. More affordable food prices can lead to an increase in caloric intake, thus helping reduce the prevalence of malnutrition, a condition the World Health Organization cites as the world's most dangerous health problem.

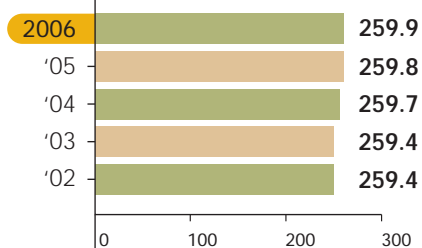
Gasoline- and diesel-fueled transportation, as well as the construction of asphalt roads, has improved food security in the region. As natural gas replaces traditional cooking and heating fuels, air quality improves and more woodland is preserved. Propane refrigerators and plastic storage containers minimize waste and reduce illness.

Life expectancy in India and the Far East is up, infant mortality rates are down, and food is more plentiful. These improvements in the standard of living are made possible in part by the application of petroleum energy, in a variety of forms, across the long chain of agriculture and food industries.

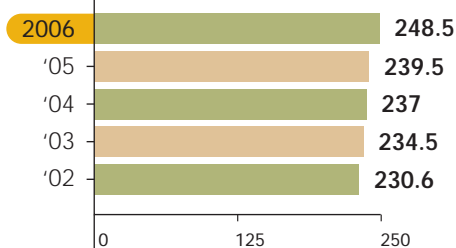
More than half of our exports of crude oil, refined products and NGL are destined for the Far East. We take great pride in reliably meeting our commitments to the region's energy needs because we know petroleum plays a vital role in growing, harvesting, transporting, storing and cooking the foods that all of us eat.

## SAUDI ARAMCO BY THE NUMBERS

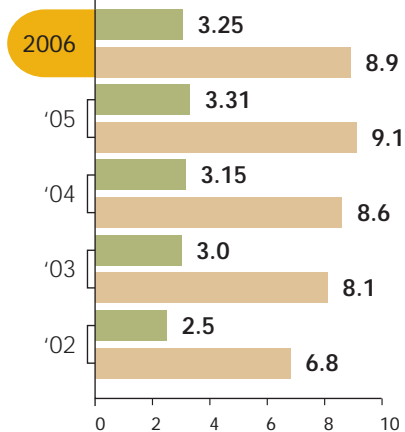
**RECOVERABLE CRUDE OIL  
AND CONDENSATE**  
(billions of barrels)



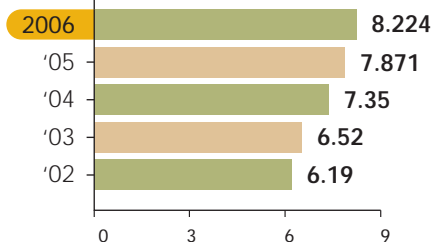
**RECOVERABLE GAS: ASSOCIATED  
& NON-ASSOCIATED**  
(trillions of scf)



**CRUDE OIL PRODUCTION**  
(annually and daily)

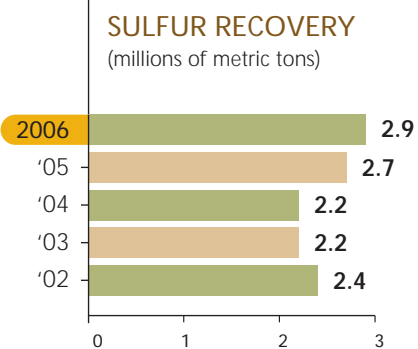
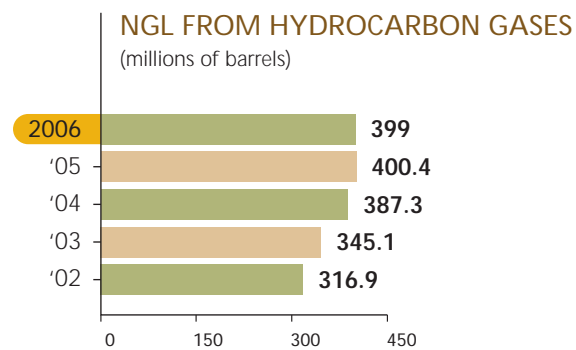
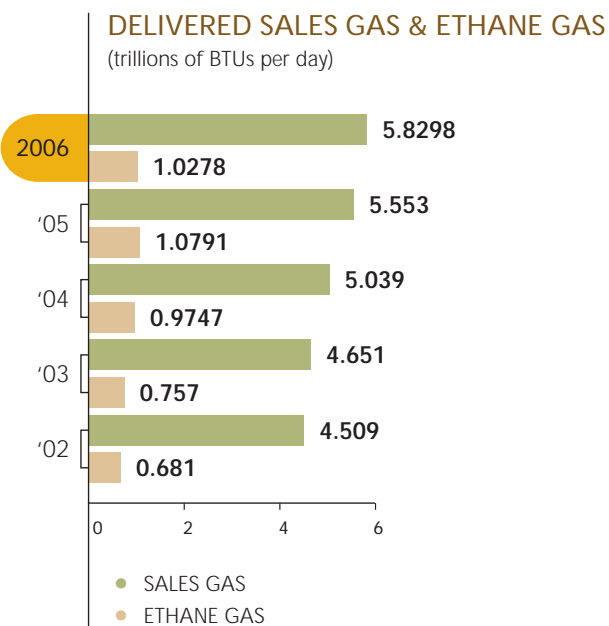


**RAW GAS TO GAS PLANTS**  
(billions of scfd)



- ANNUAL (billions of barrels)
- DAILY (millions of barrels)

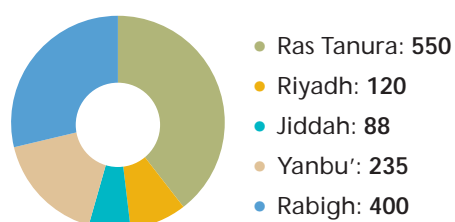




## SAUDI ARAMCO BY THE NUMBERS

### DOMESTIC REFINING CAPACITIES

(thousands of barrels per day)



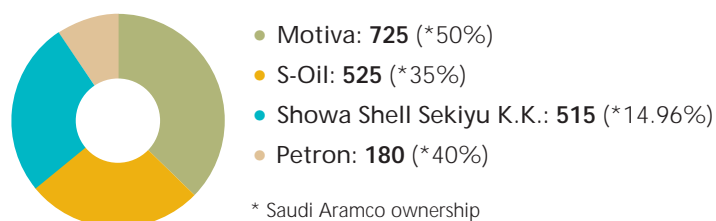
Saudi Aramco Mobil Refinery Company Ltd. (SAMREF) – Yanbu': 400  
(Saudi Aramco ownership: 50%)

Saudi Aramco Shell Refinery Company (SASREF) – Jubail: 305  
(Saudi Aramco ownership: 50%)

Total domestic refining capacity (including 50-percent share of SAMREF and SASREF): 1,745,500

### INTERNATIONAL EQUITY AND JOINT VENTURES REFINING CAPACITIES

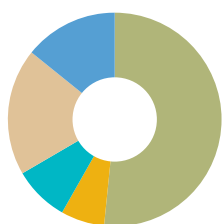
(thousands of barrels per day)



Total international equity and joint venture refining capacity: 1,945,000 bpd

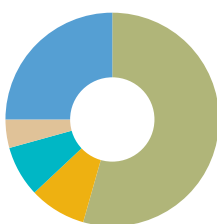
Total worldwide refining capacity (company-owned/operated and equity and joint ventures): 3,690,500 bpd

## 2006 EXPORTS BY REGION



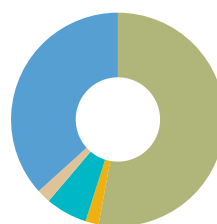
CRUDE:

- Far East: 51.6%
- Europe: 6.6%
- Mediterranean: 8.4%
- USA: 19.2%
- Other: 14.2%



REFINED PRODUCTS:

- Far East: 54.4%
- Europe: 8.6%
- Mediterranean: 7.7%
- USA: 4.3%
- Other: 25%



NGL\*:

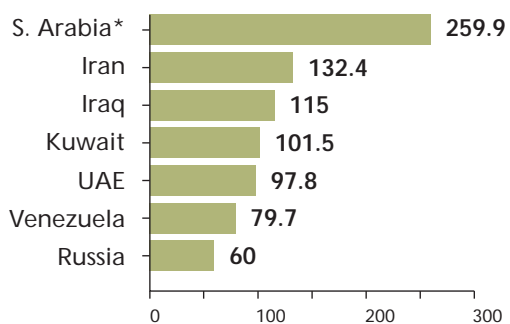
- Far East: 52.9%
- Europe: 2%
- Mediterranean: 6.3%
- USA: 2.1%
- Other: 36.7%

\* includes sales on behalf of SAMREF & SASREF

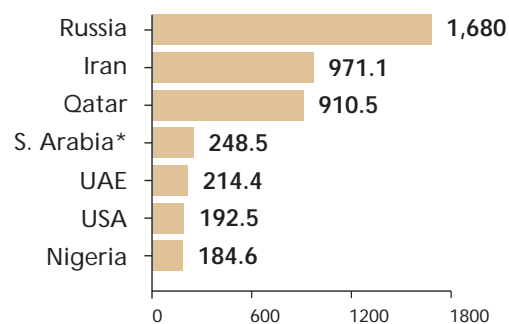
## ESTIMATED WORLDWIDE CRUDE OIL AND GAS RESERVES AS OF JANUARY 1, 2007

Source: *Oil & Gas Journal*

CONVENTIONAL CRUDE OIL RESERVES (billion barrels)



NATURAL GAS RESERVES (trillion cubic feet)



\* Source: Saudi Aramco actual

## CRUDE OIL, NATURAL GAS & REFINED PRODUCTS

### PRODUCTION / EXPORTS

Crude Oil & Refined Products (barrels)	2005	2006
Crude Oil Production, excl. NG blended	3,308,601,727	3,252,943,241
Crude Oil Exports	2,622,997,627	2,541,692,569
Crude Oil Transported Using Company or Chartered Vessels	679,212,000	648,969,000
Refined Products Production	591,948,332	595,657,467
Refined Products Exports	201,589,157	183,985,356

Natural Gas	2005	2006
Raw Gas to Gas Plants (billions of SCF daily)	7.871	8.224
Delivered Gas (trillions of BTUs daily)		
Sales Gas (methane)	5.5530	5.8298
Ethane	1.0791	1.0278
<b>Total Delivered Gas</b>	<b>6.6321</b>	<b>6.8576</b>

Natural Gas Liquids	2005	2006
NGL Production from Hydrocarbon Gases (barrels)		
Propane	150,587,512	149,320,199
Butane	94,148,281	94,338,268
Condensate	89,348,138	93,917,887
Natural Gasoline	66,298,617	61,456,003
<b>Total NGL Production</b>	<b>400,382,548</b>	<b>399,032,357</b>

Natural Gas Liquids	2005	2006
NGL Exports from Hydrocarbon Gases (barrels)		
Propane	138,038,134	141,092,586
Butane	87,142,255	80,170,054
Condensate	10,035,814	11,263,534
Natural Gasoline	54,269,189	52,848,817
<b>Total NGL Exports</b>	<b>289,485,392</b>	<b>285,374,991</b>

### SULFUR

Sulfur	2005	2006
Sulfur Recovery (metric tons)	2,716,823	2,906,911
Sulfur Exports (excl. sales on behalf of SAMREF and SASREF, metric tons)	2,391,789	2,640,250



## PRINCIPAL PRODUCTS MANUFACTURED AT IN-KINGDOM REFINERIES (BARRELS)

2006	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
RT	3,970,929	22,707,445	34,394,096	11,918,460	77,065,699	33,288,820	6,078,994	189,424,443
Yanbu'	2,803,127	5,264,395	9,384,326	2,351,203	30,530,511	31,813,627	-	82,147,189
Riyadh	2,414,830	-	10,581,356	4,704,737	19,017,766	244,273	6,861,902	43,824,864
Jiddah	1,012,808	4,630,604	4,871,648	(557,376)	7,589,983	8,250,722	1,214,961	27,013,350
Rabigh	300,523	23,735,718	-	14,744,283	42,730,138	51,973,959	-	133,484,621
<b>Total Domestic</b>	<b>10,502,217</b>	<b>56,338,162</b>	<b>59,231,426</b>	<b>33,161,307</b>	<b>176,934,097</b>	<b>125,571,401</b>	<b>14,155,857</b>	<b>475,894,467</b>

\*Negative figures primarily indicate products that were reprocessed into other refined products.

## SAUDI ARAMCO SHARE

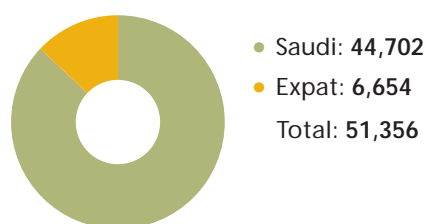
2006	LPG	Naphtha	Gasoline	Jet Fuel/ Kerosene	Diesel	Fuel Oil	Asphalt & Misc.	Total
SAMREF	134,000	-	19,520,000	10,350,000	18,640,000	14,876,000	-	63,520,000
SASREF	1,981,000	13,755,000	2,147,000	11,737,000	13,785,000	12,838,000	-	56,243,000
<b>Total JV</b>	<b>2,115,000</b>	<b>13,755,000</b>	<b>21,667,000</b>	<b>22,087,000</b>	<b>32,425,000</b>	<b>27,714,000</b>	<b>-</b>	<b>119,763,000</b>
<b>Grand Total</b>	<b>12,617,217</b>	<b>70,093,162</b>	<b>80,898,426</b>	<b>55,248,307</b>	<b>209,359,097</b>	<b>153,285,401</b>	<b>14,155,857</b>	<b>595,657,467</b>

## DOMESTIC PRODUCT SALES BY REGION (BARRELS)

2006	Central	Eastern	Western	Total
LPG	2,197,982	4,402,252	5,263,713	11,863,947
Gasoline	41,580,636	22,530,829	51,188,894	115,300,359
Jet Fuel/Kerosene	5,944,227	2,372,055	12,079,721	20,396,003
Diesel	53,922,638	36,582,285	88,532,780	179,037,703
Fuel Oil	-	5,567,590	94,750,761	100,318,351
Asphalt & Misc.	7,733,681	6,350,338	3,805,834	17,889,853
<b>Total</b>	<b>111,379,164</b>	<b>77,805,349</b>	<b>255,621,703</b>	<b>444,806,216</b>
2005	Central	Eastern	Western	Total
LPG	2,555,897	4,463,936	5,172,031	12,191,864
Gasoline	40,480,020	20,764,778	47,545,066	108,789,864
Jet Fuel/Kerosene	5,965,130	2,280,783	12,254,209	20,500,122
Diesel	50,201,672	31,104,853	83,265,679	164,572,204
Fuel Oil	-	6,423,095	87,867,971	94,291,066
Asphalt & Misc.	6,384,916	5,832,740	3,543,159	15,760,815
<b>Total</b>	<b>105,587,635</b>	<b>70,870,185</b>	<b>239,648,115</b>	<b>416,105,935</b>

## SAUDI ARAMCO BY THE NUMBERS

### WORKFORCE AS OF 12/31/2006



### SAUDI DEVELOPMENT PROGRAMS

Number enrolled at year-end 2006

Two-year apprenticeship <sup>1</sup>	5,369	College Preparatory Program	308
College Degree Program (CDPNEs) <sup>2</sup>	995	Associate Degree Program	17
Summer Programs	2,640	Advanced degree	158
Co-op Students	376	Advanced medical / dental	40
Four-year college degree	978	Two-year technical diploma	57

1. including 282 for PetroRabigh

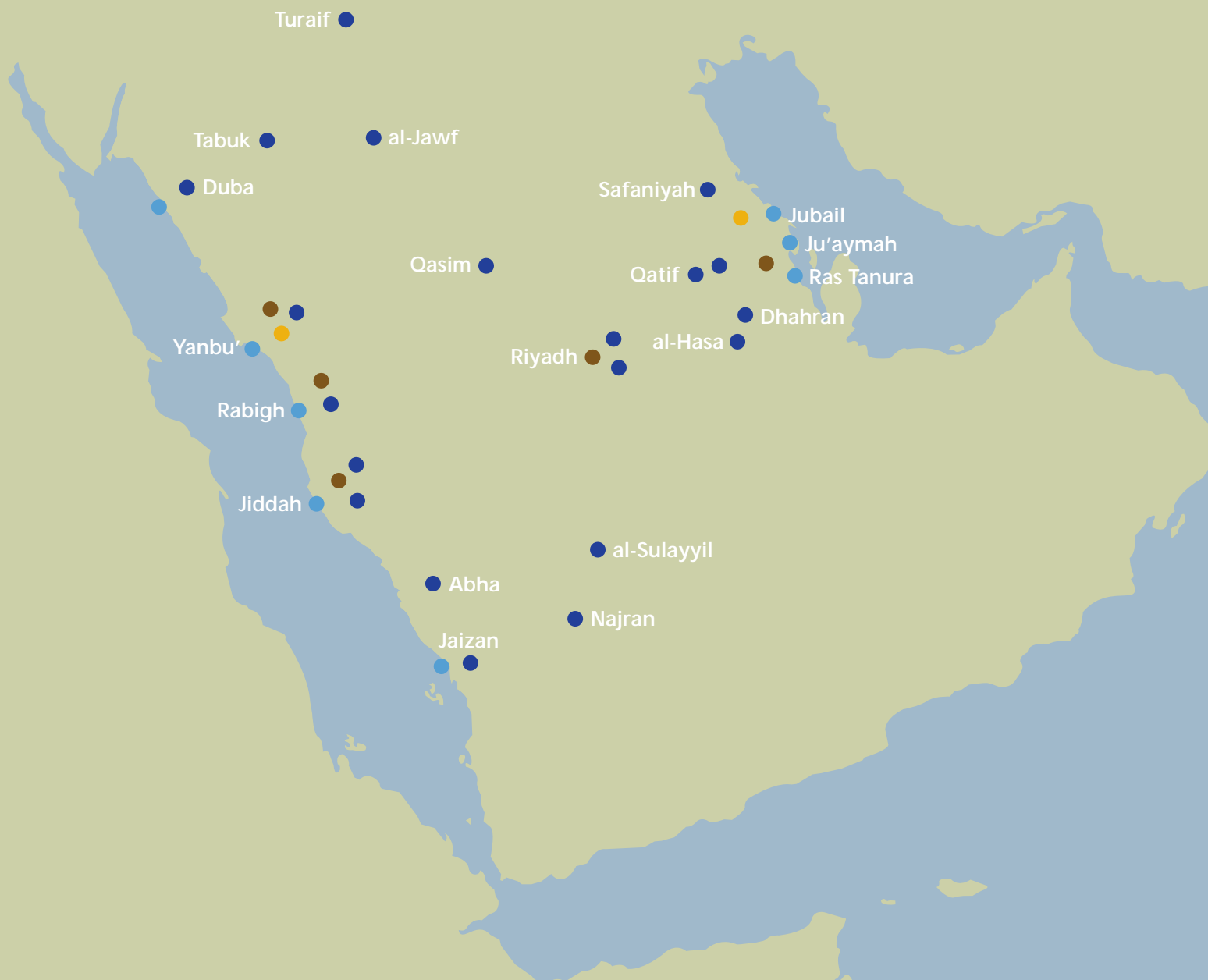
2. excluding College Preparatory Program

### CLASSIFICATION OF SAUDI CRUDE



## DOMESTIC OPERATIONS

● SAUDI ARAMCO REFINERY ● JOINT VENTURE REFINERY ○ TERMINAL ● BULK PLANT



## INTERNATIONAL OPERATIONS



- |              |  |                  |                                   |
|--------------|--|------------------|-----------------------------------|
| 1. HOUSTON   | Aramco Services Co., Saudi Refining Inc.<br>Aramco Associated Co., Motiva Enterprises LLC. | 13. DUBAI        | Vela International Marine Limited |
| 2. NEW YORK  | Saudi Petroleum International, Inc.  | 14. JUBAIL       | Saudi Aramco Shell Refinery Co.   |
| 3. BERMUDA   | Stellar Insurance Ltd.   | 15. AL-KHAFJI    | Aramco Gulf Operations Co. Ltd.   |
| 4. CURAÇAO   | Bolanter Corp. N.V., Pandlewood Corp. N.V.   | 16. BEIJING      | Saudi Petroleum Ltd.              |
| 5. LONDON    | Saudi Petroleum Overseas Ltd.  | 17. SHANGHAI     | Aramco Overseas Co. B.V.          |
| 6. ROTTERDAM | Texaco Esso AOC Maatschap<br>TEAM Terminal B.V.<br>Texaco AOC Pumpstation Maatschap        | 18. SEOUL        | S-Oil Corporation                 |
| 7. LEIDEN    | Aramco Overseas Co. B.V.   | 19. TOKYO        | Saudi Petroleum Ltd.              |
| 8. EGYPT     | Sumed Arab Petroleum Pipelines Co.   |                  | Aramco Overseas Co. B.V.          |
| 9. RABIGH    | PetroRabigh  | 20. HONG KONG    | Showa Shell Sekiyu K.K.           |
| 10. YANBU'   | Saudi Aramco Mobil Refinery Co. Ltd.   | 21. MANILA       | Aramco Overseas Co. B.V.          |
| 11. JIDDAH   | Luberef, Petrolube, Jiddah Oil Refinery Co.  | 22. SINGAPORE    | Petron Corporation                |
| 12. DHAHRAN  | Saudi Aramco Headquarters  | 23. KUALA LUMPUR | Saudi Petroleum Ltd.              |
|              |  |                  | Aramco Overseas Co. B.V.          |



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- **Saudi Petroleum International, Inc. (SPII)**  
527 Madison Avenue, 22nd & 23rd Floors  
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People's Republic of China  
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- **Saudi Petroleum, Ltd., Singapore**  
6 Battery Road, #26-01/02, Singapore 049909  
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Minato-ku, Tokyo 107-6016, Japan  
**Tel:** +81 03 5563 0551 **Fax:** +81 03 5563 0588
- **Vela International Marine Limited**  
P.O. Box 26373, Dubai, U.A.E.  
**Tel:** +971 4 312 3100 **Fax:** +971 4 331 0585

### JOINT AND EQUITY VENTURES

Motiva Enterprises LLC ([www.motivaenterprises.com](http://www.motivaenterprises.com))  
Petron Corporation ([www.petron.com](http://www.petron.com))  
Showa Shell Sekyu K.K. ([www.showa-shell.co.jp](http://www.showa-shell.co.jp))  
S-Oil Corporation ([www.s-oil.com](http://www.s-oil.com))



FROM OUR HEADQUARTERS IN DHAHRAN, AND FROM FACILITIES AND OFFICES THROUGHOUT THE KINGDOM AND AROUND THE WORLD, SAUDI ARAMCO HAS TAKEN THE INITIATIVE TO ASSURE A STEADY, RELIABLE SUPPLY OF THE PETROLEUM ENERGY THE WORLD NEEDS NOW — AND IN THE FUTURE.



