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On the cover: Sanchita Malakar received a solar panel to reduce energy costs with the help of a Chevron-sponsored livelihood program, which is featured as a sidebar in the Bangladesh case study. Until recently, the Malakars were unable to afford more than the bare minimum of kerosene for the household, so their children were unable to study after sunset. Now, thanks to the solar panel on the back of their home, the children are able to study after dark and are performing well in school.

#### Working Together for a Brighter Future

At Chevron, our top priority is to deliver affordable energy safely and reliably to support economic development and human aspirations for a rising quality of life. As a partner with governments, suppliers and communities, we contribute to health care, education and economic development for mutual benefit and progress.

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#### How We Chose What to Include in Our Report

In this report, we selected content that demonstrates our systematic approach to responsible energy development and to the challenges we face as a multinational company.

We recognize that our ability to operate and to be selected as a partner of choice is dependent on our maintaining a track record of responsible operations and meeting the expectations of our stakeholders. This report highlights how our business engages and relies on our local workforce, community members, governments and nongovernmental organizations to seek solutions to existing and emerging challenges.

The report covers topics that reflect the diversity and complexity of environments and places where we operate. We included case studies that highlight how we do business, with a focus on Operational Excellence, process safety, environmental stewardship, health, workforce safety and community development. These topics were identified during engagements with various stakeholder groups. The content also illustrates how partnerships, operations and social investment are enduring and interconnected aspects of our business model.

Thank you for your interest in Chevron. We welcome your comments on this report and additional content on our website at **Chevron.com/CR**. Feedback can be sent to us at **Chevron.com/Contact/EmailChevron**.

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#### A Message From Our CEO

"Managing risk and executing with excellence are critical to our company's success. Equally critical are the stability and vitality of the countries and communities where we operate."

For more than 135 years, Chevron has been focused on the same goal – safely developing the affordable energy vital to economic growth and development.

Fulfilling our goal involves managing the risks inherent in our industry. We work tirelessly to mitigate those risks, even as the scale and complexity of our projects continue to increase. Fulfilling our goal also involves a commitment to responsible and ethical behavior, which is embedded in our system of values. And Chevron's 58,000 employees around the world are committed to those values, which we call The Chevron Way.

The expectations of our stockholders, our partners and communities have never been higher. They expect that we will live up to these values and that we will achieve our results the right way. Every single employee, including me, has the same expectations.

Fundamental to everything we do is a constant focus on achieving higher levels of operational, environmental and safety performance. We continue to be an industry leader in personal safety, as measured by injuries requiring time away from work. And in 2012, we delivered our lowest spill volumes ever.

We are proud of our progress, but we are not at zero. We understand that the stakes are high and the tolerance is low for events that affect people and the environment. We are working to eliminate incidents.

This report shares our progress toward world-class performance in Operational Excellence, highlighting how we build a consistent safety culture, manage deepwater risk, eliminate flares, protect biodiversity in our global operations and improve the livelihoods of communities near our operations. These efforts are guided by our Operational Excellence Management System, which aligns with international standards for safety and environmental performance and drives extensive use of tools – such as stop-work authority, by which every employee and contractor has the right and responsibility to stop work when noticing an unsafe act or condition; our Environmental, Social and Health Impact Assessment, which is used before we begin and throughout the life cycle of our major capital projects; and active engagement with our stakeholders.

Managing risk and executing with excellence are critical to our company's success. Equally critical are the stability and vitality of the countries and communities where we operate. Chevron operates in some of the most challenging, complex and dynamic places in the world. In many locations, communities must confront critical social and economic issues, including access to health care, education and the resources needed for sustained prosperity.

We partner with local governments, our business partners and our stakeholders to enhance communities by generating jobs, supporting local supply chains and strengthening local economies. We also expand health and education capacity,



support small businesses, train workers to industry standards, and invest in the local workforce. For example, in Angola, Kazakhstan and Nigeria more than 85 percent of our employees are nationals.

In 2012, we purchased more than \$60 billion in goods and services around the globe, providing a meaningful stimulus for local economies. And in the past seven years, we've invested nearly \$1.2 billion in partnerships worldwide to build stronger, healthier communities. Our approach to partnership is showcased in this year's report – in how we are partnering with local government and other stakeholders to help develop the economic future of the Onslow community in Western Australia, and how we partner with governments, communities and health organizations in the fight against HIV/AIDS in sub-Saharan Africa.

We're proud of the work we do, and we're always striving to be better. By being vigilant in maintaining a strong, healthy workforce; operating safely and responsibly; partnering to create value for our stakeholders; and providing energy the right way – The Chevron Way – we help meet the world's energy needs and continue to foster economic development around the world. We hope you find the case studies and operational data in this report to be informative and useful.



#### The Chevron Way

The Chevron Way defines who we are, what we do and what we believe. At the heart of The Chevron Way is our vision...to be the global energy company most admired for its people, partnership and performance.

We make this vision a reality by consistently putting our values into practice. The Chevron Way values distinguish us and guide our actions so that we get results the right way. Our values are integrity, trust, diversity, ingenuity, partnership, protecting people and the environment, and high performance.

To read more about The Chevron Way, please visit Chevron.com/ChevronWay.

# Operational Excellence and Risk Management

At Chevron, we're focused on safely delivering the energy the world needs to power human and economic progress. This requires constant attention to countless details and processes.

Our Chevron Way values place the highest priority on protecting people and the environment. Chevron has a rigorous management system that translates this priority into world-class performance; we call this our Operational Excellence Management System (OEMS).

Chevron has built an Operational Excellence (OE) culture on the belief that incidents are preventable. We have policies, processes, tools and behavioral expectations in place to assist us in achieving this goal.

#### OE is based on five objectives:

- Achieve an incident- and injury-free workplace.
- Promote a healthy workforce and mitigate significant workplace health risks.
- Identify and mitigate environmental and process safety risks.
- Operate with industry-leading asset integrity and reliability.
- Efficiently use natural resources and assets.

Our company has made significant progress in implementing our Operational Excellence Management System through focus, discipline and hard work. In 2012, we made great strides in our personal safety performance, and we placed even greater focus on process safety. We continued to reduce the number of personal injuries. From 2001 to 2012, our Total Recordable Incident Rate decreased by 71 percent.

To accelerate progress on preventing process safety incidents, we launched workshops in managing process safety for executive leaders, who then cascaded this training to their organizations. Our Corporate OE Audit group assessed the adoption of process safety standards throughout the enterprise for asset integrity, operating procedures and technical codes. We also continued to build our companywide Compliance Assurance system and deployed new auditor training to improve the performance of the function.

For more details, please visit Chevron.com/OE.

As the Green Canyon 6A offshore platform ends its producing life, Chevron safely removes the structure. The lower 485 feet (148 m) of the platform's support legs remain in place under water as an artificial reef, a habitat that supports a rich diversity of marine life.





#### Protecting People and the Environment

We believe that every one of our employees and contractors, whether in offices or in the field, plays an important role in maintaining safe and reliable operations. It's not just good for business; it's the right thing to do.

Incidents in 2012 – the January fire aboard the KS Endeavor drilling rig working offshore for Chevron Nigeria Ltd. and the August fire in the Chevron U.S.A. Inc. Richmond, California, refinery crude unit – remind us that we must do better. These incidents do not reflect the expectations we have of ourselves or the expectations that the community has of us.

We investigated the incidents and engaged closely with regulators, which facilitated our implementation of improvements in processes and operations. The actions we are taking will strengthen management oversight and add layers of process safety protection.

Chevron remains committed to zero incidents. We are confident that our continual improvements in the areas of process safety, environmental stewardship and operational discipline will significantly reduce the potential for future incidents and will keep our workforce safe.

#### **Executive Interview**

### On Operational Excellence



Warner Williams
Vice President
Gulf of Mexico Business Unit

# What are the greatest challenges to operating safely and responsibly?

There are a number of factors that could increase our exposure to incidents if we don't work consistently to manage risks properly.

Chevron has a growing global workforce, with close to 260,000 employees and contractors throughout the world.

Our portfolio is increasing in size and technical complexity. For example, today we use new technologies and equipment to find and produce natural resources in water depths that were unheard of 10 years ago.

At the same time, some of our existing infrastructure is aging. Maintaining the integrity of these assets continues to be a focus area for us as we seek to improve resource recovery.

We can manage these factors by being relentless in our efforts to reduce operational risks and to protect people and the environment.

# What is Chevron doing to improve safety in operations?

Operational discipline – completing every task the right way, every time – is critical to the success of our business.

In 2012, we initiated WELLSAFE, a certification program rooted in operational discipline that provides the maximum reasonable assurance that well control will be maintained at all times and further reduces the potential for an oil spill during drilling operations.

We also intensified our focus on operational discipline through the deployment of coaches who verify workforce competency on safe-work practices, appropriate safeguards and controls for high-consequence activities.

We know that achieving zero incidents is possible, having realized this goal in several areas of our company and with many contractors. In 2012, 50-plus groups achieved more than 1 million hours without a Days Away From Work incident. We also had our lowest-ever number and volume of spills.

# What is the role of leaders in reinforcing safety?

Our mandate is to make sure that every member of our workforce goes home safe after his or her work shift. Leaders demonstrate their commitment to safety through personal engagement with the workforce.

Leaders at all levels make site visits to identify potential hazards in our operations, check the existence and effectiveness of key safeguards, and reinforce the culture of personal and process safety in the daily work activities of employees and contractors.

Leaders reinforce the workforce's knowledge and application of good stewardship practices through training, certifications, onsite coaching, mentoring and safe-work activity verification.

It takes all of us being vigilant about maintaining our safeguards and equipment to systematically eliminate incidents.



#### U.S. Gulf of Mexico

### **Executing With Excellence**



Chevron is one of the largest producers of crude oil and natural gas in the U.S. Gulf of Mexico. A continuing commitment to safety, leading Operational Excellence (OE) programs and new technology allow us to tap into needed energy supplies. At the same time, our work in the Gulf creates jobs and grows businesses.

Chevron's Billy Varnado knows that the time for easily finding oil is gone. Twelve years ago, he worked on our first discovery in the deepwater region of the Gulf of Mexico, the Genesis Field, located approximately 150 miles (241 km) south of New Orleans, Louisiana, where we tapped resources 12,000 feet (3,658 m) below sea level. Today, his work takes him another 130 miles (209 km) south of Genesis to the Chevron-operated discoveries Jack and St. Malo, where we will seek energy at depths of 27,000 feet (8,230 m) below the water's surface.

"Jack and St. Malo are being developed at extreme depths and amid

challenging temperatures, currents, pressures and drilling complexity," said Varnado, the Jack/St. Malo project director. "We implement processes to help ensure the health and safety of our people and the environment, from design to production and through the life of the field's operation, which can last for decades."

Jack and St. Malo highlight the complexity of finding new energy sources. The project involves two fields 25 miles (40 km) apart. Each field will have separate clusters of wellheads on the seafloor that will be connected to a single floating production unit located between the two facilities. When the

Above: Bob Miller is a field Health, Environment and Safety specialist in the Gulf of Mexico aboard the Pacific Santa Ana, a deepwater drillship built to Chevron's specifications and the first drillship with dual-gradient drilling capabilities, which can enhance the safety of deepwater drilling.

\$7.5 billion Jack/St. Malo project comes on line in 2014, it is expected to supply energy resources for 30 to 40 years.

"Our growth depends on our ability to maintain the region's confidence in our deepwater drilling projects and practices. People expect that the energy the world needs will be produced safely and reliably," said Warner Williams, vice president of the Gulf of Mexico business unit. "There is no room for complacency in our operations."

#### Safety in Design and Processes

Our Operational Excellence Management System (OEMS) guides our commitment to incident-free operations. OEMS includes policies, processes, tools and behavioral expectations that focus our workforce on protecting the safety and health of people and the environment and on conducting our operations reliably and efficiently.

"We understand the impacts that can result from an operational error," said Stephen Thurston, vice president of Chevron Deepwater Exploration and Projects (DWEP) in the Gulf of Mexico. "Operational Excellence isn't static, and it must be applied to every task every day. All operators and business partners must also be committed to improvements in OE, especially as new technology is developed."

Within OEMS, Chevron's approach to process safety management is based on the Center for Chemical Process Safety's *Guidelines for Risk Based Process Safety*, and we establish stringent requirements for the design, construction, operation and maintenance of our facilities.

The Jack/St. Malo facilities and their installation are massive undertakings. "The structures we're building are the size of huge hotels, complete with living quarters, food services, vessel and helicopter transportation, advanced surveillance, and communication and control capability," said Mike Casey, general manager for the Gulf of Mexico operations.

Process safety is incorporated into the design of our production facilities. Our Big Foot facility, another field in the Gulf of Mexico 225 miles (362 km) south of New Orleans, is being designed to survive 1,000-year-storm conditions. It will include 16 tendons made of steel pipes, each up to 44 inches (112 cm) in diameter, to moor a nearly 400-footwide (122-m) floating platform to the ocean floor approximately 1 mile (1.6 km) below the surface.

In 2012, we took delivery of the *Pacific Santa Ana*, the first deepwater drillship built to our specifications for dualgradient drilling using a seabed pump located above the blowout preventer. This drillship will be the first in the industry to deploy the GE MaxLift 1800<sup>TM</sup>

#### Turning Rigs Into Reefs

When the last drop of new energy is extracted by many of our offshore oil platforms, one job ends and another begins. Since 1983, we have donated 74 structures to programs in Louisiana, Mississippi and other U.S. states that create artificial reefs in the Gulf of Mexico.

Reusing the platforms creates a new ecosystem with thousands of invertebrates and fishes. "The platforms provide excellent habitat that is beneficial both to marine organisms that inhabit these reef systems and to commercial and recreational fishermen," said Lew Dennis, U.S. offshore area manager for Chevron Environmental Management Co. (EMC).

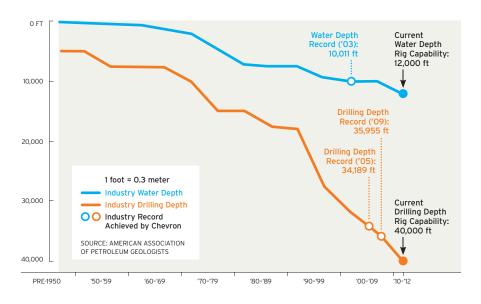
"Something no one can argue about is that there's no better fishing anywhere in the Gulf than off the Louisiana coast, and that's due in part to these artificial reef structures created from decommissioned oil platforms," said Randy Pausina, assistant secretary at the Louisiana Department of Wildlife and Fisheries.

Turning rigs into reefs presents unique challenges. For example, EMC and our Gulf of Mexico operations worked together to decommission a platform that stood in 473 feet (144 m) of water near the mouth of the Mississippi River. The project required removing the platform "jacket," or support legs. The jacket was removed as one 520-foot-tall (158-m) piece. Instead of having divers conduct the hazardous work of removing the soil and sand around the footings, large remote-controlled dredges safely extracted the material. The massive platform deck, or topsides, was removed by a special heavy-lift vessel and brought to shore for disposal. Through the Louisiana Artificial Reef Program, the support legs were lifted, towed to a designated location and lowered to the seafloor to create an artificial reef.

Left: For more than 60 years, new technology has enabled the oil and gas industry to drill at ever-greater depths. Chevron achieved industry water depth and drilling depth records in 2003, 2005 and 2009.

#### Finding Oil Ever Deeper

The Oil and Gas Industry Increases Its Reach





**Above:** Construction is under way on the Jack/St. Malo project in the fabrication yard near Ingleside, Texas. Approximately 1,000 workers are constructing the massive structures, which are scheduled to depart for the deepwater Gulf of Mexico in late 2013.

The Jack/St. Malo project is creating more than 1,000 construction jobs in the region

pump, the core component of dual-gradient drilling. This technology allows wells to be drilled more effectively by managing two fluids in the wellbore: a seawater-density fluid from the seabed to the drilling rig, and a higher-density drilling fluid from the seabed to the bottom of the well. This combination of fluids is much more aligned with the natural pressures of the formations in the subsea well and offers the potential to dramatically simplify well designs and improve operational safety. The equipment developed for dual-gradient drilling also allows operators to more

quickly detect and react to pressure changes encountered while drilling.

Also in 2012, following benchmarking with industries such as commercial aviation, commercial nuclear power and the U.S. Navy submarine force, we began developing our WELLSAFE certification program to bolster our efforts to prevent well-control incidents. The program addresses procedures from the design of wells through rig operations and includes extensive auditing requirements to provide significant assurances that well control can be maintained. Our WELLSAFE program is scheduled to be fully implemented by year-end 2014.

#### A Culture of Safety

"We have worked hard to build a culture of safety and environmental stewardship that strives to achieve high performance and prevent incidents," said Warner Williams.

In 2012 in the Gulf of Mexico, we safely drilled 46 development and delineation wells, which establish the productive area of oil and gas accumulations.

We had no recordable fires in 2012, and our Gulf workforce recorded more than 12 million work hours without a Days Away From Work injury.

Before employees or contractors begin working in Gulf waters, they are rigorously trained in safety procedures. All drilling personnel must have current industry-recognized certifications that cover such procedures as well control and the management of abnormal conditions. Chevron requires its contractors to adhere to company safety standards and to comply with the company's OE practices. This is critical because our contractors conduct 80 percent of the work in drilling and completions for DWEP.

"We can break every deep-drilling record and make new discoveries, but we will have failed if one of our team members is injured," said Marcel Robichaux, general manager for DWEP Drilling and Completions.

Worker and process safety are enhanced by our longstanding commitment to practices such as stop-work authority, which allows any employee or contractor – from a cook to a drilling superintendent – to stop the work on a project to raise a safety concern, without repercussions. That thinking extends to project planning. Iain Haughie, Chevron's DWEP Health, Environment and Safety manager, said that if an operating plan isn't right or if something changes, it's part of our safety culture to stop the work and revisit the plan.

"We have five drillships right now in the deep waters of the Gulf," said Haughie, "and we're drilling a series of wells over the next few years. You have to get it right every single time."

Hear employee Natalie Martin explain how process safety enhances personal safety on an offshore rig at Chevron.com/CR2012/GOM.



#### Bangladesh

### Journey to Safety



Chevron is the largest foreign investor in Bangladesh, providing employment and supplying approximately 50 percent of the natural gas the country consumes. To bring our Bibiyana Field into production, we recruited 2,300 Bangladesh citizens to work on the project. For people living near our facilities, who were accustomed to working in agriculture, this new project marked the beginning of a dramatic transformation in safe-work practices and behaviors that extend into daily living.

Amid the lush rice paddies and 150-plus-year-old tea plantations typical of northeast Bangladesh lie Chevron's Bibiyana, Jalalabad and Moulavi Bazar natural gas fields. Generations of farmers have worked the rice paddies and other crops between seasonal floods. Largely because of this agricultural tradition, many in the area had little experience with how a complex industrial facility works. As we began employing villagers in 2005 to build the Bibiyana Field, the nation's largest-producing natural gas field, we introduced a

culture of safety that was unfamiliar to many local residents. We did so to make sure that people and the environment were protected.

"In a predominantly agrarian economy with no large-scale manufacturing or industry, it took time for our workforce to develop a culture in which safety is above all else," recalled Kinnesh Dalal, Chevron Health, Environment and Safety manager in Bangladesh. Prospective workers were unaccustomed to wearing protective shoes and didn't understand the need for safety

**Above:** Workers at the Bibiyana gas plant receive safety awareness training that extends from their jobs into their homes and communities.

glasses and fire-retardant clothing. To operate the field in a safe and responsible manner, he said, "we had to foster a cultural paradigm shift both inside the plant and in the communities around it."

Today in Bangladesh, Chevron has amassed 40 million work hours since the last Days Away From Work injury in 2008, and we have had no significant environmental incidents, fires or spills. "We invested heavily in our workforce to build capabilities, institutionalized global processes focused on operational excellence and initiated training programs. It has been a many-year journey toward achieving zero incidents in Bangladesh," said Dalal.

Chevron has been operating in Bangladesh since 2005, following the acquisition of Unocal. We have approximately 700 employees and more than 2,400 contractors in the country. We are working with communities and the government-owned Bangladesh Oil, Gas and Mineral Corp., known as Petrobangla, to reduce the nation's reliance on imported energy. By 2014, expansion of the Bibiyana Field now under way is expected to increase gas plant capacity by 50 percent, with new pipelines also being constructed to safely deliver this added energy capacity.

#### Driving a New Safety Ethic

"Today's safe operations are a result of creating an understanding of the importance of personal and process safety, and then providing tools and training under Chevron's supervision,"

# 40 million

work hours have been logged since the last Days Away From Work injury

said Geoffrey Strong, Chevron's Bangladesh country manager.

We expanded our training capacity in 2012 with a new Health, Environment and Safety training center for contractors and community-based workers. Since opening in April 2012, more than 2,000 people have been trained.

"I was like a wide-eyed child at the training center, learning things for the very first time," said Abul Kalam, a labor team leader with five years of experience at Chevron. He said that Chevron "is essentially a huge classroom. I do not look at Chevron as just a place of work; for me personally, this is a place of learning."

**Above:** Basir Miah, a member of the Chevron-supported economic development program in his village, received training to grow his business. He now owns eight cows and earns a steady income raising cattle and selling them at a profit.

# Promoting Sustainable Livelihoods

In the rural villages near our natural gas fields, our economic development programs foster sustainable livelihoods to help residents overcome socioeconomic challenges.

Our livelihood programs were initially created to assist people who depended on 69 acres of land that the government acquired to develop the Bibiyana gas field in 2006. "Bibiyana was a predominantly agrarian economy with no industrial presence, low literacy rates and inadequate infrastructure," said Naser Ahmed, Chevron Bangladesh's External Affairs manager. "We've built relationships with local communities and nongovernmental organizations to implement programs that provide lasting socioeconomic opportunities."

With residents and partners, we helped create alternative livelihood programs by establishing village development organizations (VDOs) comprising members selected by the community. These programs provide training in income-generating skills, such as tailoring, poultry farming, goat rearing, engine maintenance and business management.

As of 2012, programs launched in seven villages near the Bibiyana and Moulavi Bazar gas fields provide solar panels and energy-efficient stoves to reduce homelighting and fuel costs. The savings are invested in income-generating enterprises and a savings fund maintained by the VDO. Chevron contributes to a seed-fund, to which VDO members add their savings. Members draw upon the fund to build their small and medium-size enterprises.

Today more than 100 VDOs are benefiting nearly 4,000 families living near our three major gas fields. Ojud Miah completed a Chevron-funded training course and received a microloan for his duck breeding enterprise. "I earned enough to build a concrete house for my family and pay for my younger sister's wedding. I completed a paraveterinary training course through my VDO, and now earn a steady income. After taking care of household expenses and my children's schooling, I am able to set aside 10 percent in savings every day. My journey has just begun."

# 2,000 people

have been trained in Chevron's new Health, Environment and Safety training center

Employees and contractors are required to undergo our Fitness for Duty process, which identifies the circumstances under which workers are able to safely perform essential physical, psychological and cognitive job requirements without risk to self, others or the environment. Trainers make sure new employees understand our Operational Excellence Management System, the framework Chevron uses to manage process safety, health and personal safety, the environment, reliability, and efficiency. Because the literacy rate in Bangladesh is approximately 56 percent, we adapted the way we teach to ensure understanding, using repetition, memorization, visual aids and additional field-testing. Six-month-long mentoring programs were established for many positions.

Every morning, employees hold a "tool box" meeting to review safety procedures for the tasks being performed that day. The type of work ranges from crane operation to leveling an access road. Employees are reminded of stop-work authority, which encourages any employee or contractor to stop work when an unsafe condition or act is recognized.

In 2012, the Muchai compression project, which added pipeline capacity to transport natural gas from our three fields, involved more than 2.6 million work hours and was completed with no recordable incidents.

#### Improving Contractor Safety

"We want to use a local workforce and are committed to working with local

companies, some of which do not have strong safety performance," said Zulfikar Ahmed Chowdhury, Chevron field manager for community engagement. "We help contractor companies through extensive safety training so that they can be hired."

Chevron enlisted 111 vendors and suppliers directly from the local community. These contractors supply labor and materials for minor civil, construction and mechanical work. We work with our contractors to develop risk mitigation plans and administer safety management systems. Contractor safety performance has improved because of intense Chevron oversight and structured, continual training and mentoring.

"When we first started in 2005, things were not very easy for us as we had no experience working for a company that had such high expectations for safety performance. We had to work very hard to reach the standard set by Chevron," said Md. Boyet Ullah, proprietor of Zakaria Enterprise, which has been supplying laborers and materials.

Firuz Miah, a contractor working with the facilities engineering team, said, "Even if I go elsewhere, whatever I have learned here will benefit me."

#### **Extending Safety Into the Community**

When building our Bibiyana gas plant in 2007, we implemented our Environmental, Social and Health Impact Assessment process to identify and minimize potential project impacts, and we conducted comprehensive community engagement programs. For example, after learning that the community extensively used a narrow, winding main supply road, we implemented a safety program along the route. In addition to installing extensive road signage, we implemented a road safety campaign for area residents, including training 180 local drivers, distributing safety booklets and providing reflectors for nonmotorized vehicles.

"Community engagement is an essential part of our business here,"

said Strong. "Having an effective and personal relationship with the community helps us to address critical socioeconomic challenges that benefit both our operations and our neighbors."

We extend concepts and benefits of our safety culture into communities. For example, because motor vehicle safety is the single largest safety risk outside our facilities, with 85 deaths for every 10,000 registered motor vehicles in Bangladesh, we developed a comprehensive driver safety program, including initiatives to raise awareness in the community. We continue to engage the community on various initiatives, including earthquake preparedness and first-aid training for health care workers.

Employees are transferring what they learn from Chevron to their homes and into the community. "My friends say I've completely transformed and have influenced those around me," Abul Kalam said. "On my way home from work every day, if I see something being done in an unsafe way, I point it out to people, and they stop and listen."

Now, after eight years with Chevron, onsite Health, Environment and Safety representative Saleh Ahmed said he tells his children the safety stories he learns at work. "They listen to me because they want their father to return home to them safe and sound every day. And as their father, I tell these stories because I want them to grow up safe and protect themselves from life's many mishaps."

Safety, he added, ultimately is a system of rules, processes and procedures that only work "if you believe in them from the core of your being. Before working here, there was a time when I would get the odd minor injury here and there; but working for Chevron in the past five or six years, I have not had so much as a scratch."

# Overview Environmental Stewardship

Our environmental stewardship efforts focus on minimizing our environmental footprint, from initial exploration through the life of an asset.

Wherever we operate, our environmental stewardship process, part of our Operational Excellence Management System (OEMS), helps us manage activities that have the potential to affect the environment. Consistent with ISO 14001, we defined seven types of environmental activities, or "aspects," that we address:

- Accidental Releases Management
- Air Emissions Management
- Natural Resources Managemen
- Energy Use and Greenhouse Gas Management
- Legacy Sites Management
- Waste Management
- Wastewater Management

Through the entire life cycle of a project – from planning and construction through operation and decommissioning – we review and adapt our environmental stewardship efforts annually as we reassess potential environmental risks associated with our activities.

Our Upstream operations adopted uniform standards and operating practices, beyond applicable legal requirements in some instances, to minimize environmental impacts from offshore drilling fluids and cuttings (minerals and other materials removed from a borehole), associated-gas flaring and venting, air emissions, produced water, and waste.

Based on the review of potential impacts and existing controls, operations are required to identify improvement opportunities and incorporate those that are the highest priority into their business plans. This ongoing review and identification of next steps is the continual improvement that is a core component of our OEMS and helps drive our business units to higher levels of environmental performance.

For more about environmental stewardship, please visit Chevron.com/Environment.



#### Kazakhstan

### **Driving Environmental Progress**



Chevron is Kazakhstan's largest private oil producer, holding important stakes in the nation's two biggest oil-producing projects – the Tengiz and Karachaganak fields. We are a 50 percent partner in the Tengizchevroil (TCO) joint venture, which operates the Tengiz Field. Through significant investments and environmental standards, TCO's workforce is continually improving environmental performance.

As Tengizchevroil employee Tatyana Afanaseva flew by helicopter over the oil and gas fields that rise from the Caspian Sea's northwest shore, she recalled how the panorama below has changed over the past two decades.

"In the early 1990s, you saw gas released and burned from flare stacks during oil production. There were also many large, square yellow sulfur pads created as a byproduct of the oil production process," said Afanaseva, chief technologist of TCO's Process Engineering department. "Today, we observe a very different picture."

The TCO joint venture was established in 1993 between Chevron, the newly independent Republic of Kazakhstan and other partners to produce oil in the western part of the country. TCO's Tengiz Field is one of the world's deepest developed oil fields and, along with the smaller Korolev Field, covers 970 square miles (2,500 sq km). Afanaseva is one of nearly 3,200 Kazakhstani citizens who make up 86 percent of TCO's workforce.

Working with the government and community, the joint venture has invested \$2.5 billion since 2000 on projects that resulted in a reduction

**Above:** Khairliyev Alibek is a unit operator at the Tengiz Field's Second Generation Plant. The plant has allowed TCO to increase production and, through the use of advanced technology, improve environmental protection.

of TCO's environmental impacts, such as projects to eliminate continuous flaring, reduce sulfur storage, and conserve and treat water.

# **Extinguishing Continuous Flares**When TCO assumed control of the Tengiz Field in 1993, the field's ongoing operations included the continuous flaring of natural gas.

TCO has invested

# \$2.5 billion

since 2000 on projects that reduced its environmental impacts

"Today, the only flaring remaining in TCO's operations is intermittent flaring related to maintenance and repairs, or when necessary for safety," said Nurlan Kaliev, deputy director for major capital projects. As TCO began to increase its oil production, the joint venture initiated a series of major capital projects from 2000 to 2012 that ultimately eliminated continuous flaring and reduced its overall flaring volumes by 92 percent.

Recognizing the success of TCO's efforts to reduce flaring, the Global Gas Flaring Reduction Partnership, a public-private partnership launched by the World Bank in 2002, awarded TCO the Excellence in Flaring Reduction Award at its 2012 conference in London.

"Flaring reduction minimizes environmental impacts. Our process improvements also allow us to capture gas that would otherwise be flared and to commercialize it to meet the demand for affordable energy," said Mike Jennings, TCO's general manager for Operational Excellence and Health, Environment and Safety.

#### **Reducing Sulfur Inventory**

Tengiz crude oil contains some of the highest concentrations of sulfur in the world. As a result, managing the large amounts of sulfur generated during oil and gas processing is a key operational issue for TCO. Historically,

sulfur that was removed during oil and gas production was accumulated on large, open concrete pads. The scale of the pads led to the public's perception that there were environmental and health impacts associated with sulfur handling and removal.

"Through educational programs and independent health studies, TCO has been working for years with government entities and communities to correct misperceptions about the storage of sulfur on pads in the open air," said Dastem Zhassanov, Regulatory Affairs coordinator for TCO.

In 2006, TCO, the Ministry of Oil and Gas, and the Ministry of Environmental Protection created the Interdepartmental Coordination Council (ICC) to study issues related to sulfur storage and identify methods to improve its management. The study was the first of its kind in Kazakhstan and included local government, the national oil and gas company, and independent research institutes from Russia and Canada.



#### **Understanding Flaring**

Flaring is the burning of natural gas in an open flame into the air. When crude oil is brought to the surface in the production process, gas associated with the oil rises with it. In locations where there is no market for the gas, a common historical practice has been to flare the gas so that it does not pose a hazard to workers or residents near the operations. Gas travels up tall metal pipes called flare stacks to the nozzle or burner tip located at the top. A pilot light or electronic igniter then ignites the gas.

The World Bank reported a 9 percent reduction in flaring globally in 2010 at a time of increasing oil and gas production. In 2011, the World Bank estimated that total emissions from gas flaring represented approximately 1.2 percent of global  $\mathrm{CO}_2$  emissions. Efforts such as the Global Gas Flaring Reduction (GGFR) Partnership, a public-private partnership launched by the World Bank in 2002 and in which Chevron has been an active participant, are having a positive impact.

Chevron has adopted a routine-flaring reduction standard that aligns with the World Bank's GGFR voluntary standard. This standard requires, where feasible, that the majority of existing routine flaring of associated gas be eliminated and that all new capital projects be designed and operated without continuous routine flaring.

We have invested billions of dollars in infrastructure projects in Angola, Kazakhstan, Nigeria and elsewhere to eliminate routine flaring and direct the natural gas to productive economic use. Since 2003, we have reduced the volume of gas we flare and vent in Chevron's Upstream operations by 41 percent, as defined by our flaring and venting environmental-performance standard. We have simultaneously reduced greenhouse gas emissions from flaring and venting by 20 percent, based on the equity share of all Chevron's global interests.

Left: At a Tengiz Field processing unit, sour gas is separated from crude oil. Approximately one-third of the gas produced is reinjected to maintain pressure in the reservoir and eventually help recover more oil.



**Above:** In addition to crude oil, Tengizchevroil produces liquefied petroleum gas, dry gas and four forms of sulfur (liquid, granulated, flaked and blocked). A natural resource for Kazakhstan, sulfur is a stable, nontoxic solid that is important to animal and plant life.

TCO has achieved a

# 68% reduction

in its sulfur inventory since 2005

"The study showed that sulfur pads in Tengiz had no impact on the nearest community and no measurable impact on groundwater, air or soil," said Rzabek Artygaliev, TCO's general manager for Policy, Government and Public Affairs. The results were published and presented at a public hearing in 2007.

While this study showed no measurable impacts related to TCO's activity, the ICC is using the results to inform the

development of technical regulations and industry standards for better sulfur handling and storage. Upon completion, these will be presented to the Republic of Kazakhstan for review and implementation as national standards.

As part of its own sulfur management program, TCO has reduced the volume of sulfur stored on open-air pads by more than two-thirds from peak quantities in 2005. To shrink its sulfur inventory, TCO processes sulfur into a number of marketable products. As a result of these efforts, by the end of 2012, TCO had reduced its sulfur inventory to approximately 2.9 million tons, down from a peak volume of 9 million tons. By 2015, TCO expects to have reduced its sulfur inventory by 95 percent.

#### **Conserving and Treating Water**

TCO, like similar operations throughout the world, requires access to viable quantities and qualities of water in order to operate. "The availability of fresh water is critical to many industries, and the oil and gas industry is no exception. Global population growth and an increasing demand for fresh water are pressuring industry to achieve more sustainable operations and water use," said Jan Slange of Witteveen+Bos Kazakhstan, an engineering firm that works with TCO on water conservation.

Fresh water is supplied to TCO by pipelines from Kazakhstan's Kigach River, which is a tributary of the Volga River. The water traverses more than 310 miles (500 km) of an industrialized region of western Kazakhstan before arriving at Tengiz. TCO's reliance on a single source of water was identified as a potential supply risk several years ago.

TCO is addressing this risk by conserving fresh water through reuse and recycling. This strategy is part of a water management plan that includes two facilities that are expected to reduce the volume of water required from the Kigach River by about 25 percent of the current volume. The first facility, to be completed in 2013, will treat an average of 1.6 million gallons per day of wastewater generated by TCO's employee and contractor living facilities. The second facility will recycle water used for industrial purposes at TCO's plants. When completed in 2014, the facility is expected to yield 950,000 gallons per day of recycled water for use at the Tengiz plant.

"Water treatment and recycling facilities are examples of the sustained progress to protect and conserve natural resources," said Nick Thomas, the treatment facility's project manager. "TCO looked at its water use and made changes that are mutually beneficial to its business and the environment."

Listen to TCO's Ulzhan Shonataeva describe her development assignment at Chevron in California at Chevron.com/CR2012/TCO.



# We believe that respecting the environment and biodiversity can be compatible with providing energy.

The protective measures we take are based on our awareness of the value of the natural world and the importance of conserving the rich variety of life on Earth, its ecosystems, species and the ecological processes that support them.

Chevron's Biodiversity Statement expresses our commitment to incorporating biodiversity considerations into the evaluations and decisions regarding our capital projects. Our employees work to protect habitats near our operations and share their best practices through the Chevron Biodiversity Network.

Our Operational Excellence Management System includes our Environmental, Social and Health Impact Assessment (ESHIA) process, which requires all new major capital projects to be evaluated in order for us to understand potential negative impacts and avoid, minimize and mitigate them where possible. The ESHIA process begins early in our planning and includes stakeholder engagement throughout the life of a project.

Because we often operate near ecologically sensitive areas, under the ESHIA process, we conduct a baseline assessment of existing environmental conditions, such as the presence of habitats or fishing grounds, near our capital projects.

The assessment results are incorporated into project planning to make positive contributions to biodiversity conservation and facilitate communication with regulatory agencies and our partners.

#### Angola

### Conservation Through Collaboration



For more than 75 years, Chevron has played a major role in Angola's energy sector. Whether operating during periods of stability or unrest, we have been contributing to the growth and prosperity of the country and its people. Cabinda Gulf Oil Co. Ltd., Chevron's wholly owned subsidiary, is the country's largest foreign oil-industry employer. Our offshore operations provide energy while conserving ecosystems and supporting the livelihoods of fishermen.

Chevron environmental supervisor Margarida Peliganga is part of a team that protects endangered turtles that come ashore to breed, dig sandy nests and lay their eggs on the beaches at Chevron's Malongo oil production facilities near Cabinda, Angola.

"It's inspiring to witness nature at work, starting with the adult turtles coming ashore and later seeing hundreds of hatchlings scamper toward the ocean for the first time," said Peliganga.

The sea turtle conservation program helps protect the endangered olive

ridley sea turtle from poachers, dogs, flooding and erosion that can disrupt the turtles' habitat. Annual counts of nesting turtles contribute to international research databases and environmental impact assessments. Since the monitoring project began nine years ago, program partners have documented approximately 1,400 nests and more than 48,900 hatchlings. Sea turtle monitors tagged 157 turtles for tracking.

The program is one example of Chevron's environmental stewardship efforts in Angola. Through **Above:** Humpback whales are often seen offshore Angola when the species visits western Africa for mating and calving.

conservation partnerships and collaboration, we implemented programs to manage our environmental footprint, such as locating facilities to safeguard sensitive habitats, protecting marine mammals through cooperative science and management, and reducing offshore flaring during the oil production process.

#### **Angola LNG Protects Habitats**

Chevron has a 36.4 percent interest in Angola LNG Ltd., a company that owns an onshore development to liquefy and export natural gas at the mouth of the Congo River Basin. When the location of the liquefied natural gas (LNG) facility was being determined, the Angola LNG joint venture used Chevron's Environmental, Social and Health Impact Assessment (ESHIA) process to understand the area's environmental and social conditions.

Sheryl Maruca, senior scientist and former Health, Environment and Safety manager for the Angola LNG project, said the ESHIA results helped to identify a proposed site location that would minimize potential impacts to habitats, the local community and

# 48,900 hatchlings

have been documented since sea turtle monitoring began nine years ago



Above: Near Chevron operations, a sea turtle awareness campaign was initiated within the workforce and local communities. Researchers and their assistants from local villages regularly patrol the beach and protect nests on the Atlantic coastline. Sea turtles are identified and tagged in order to study their migratory paths and biological cycles.

livelihoods. "The assessment identified mangrove areas and other sensitive habitats, culturally important sites, and areas used for farming," she said. "This led to a proposed plant site on the north side of an existing service and supply base for offshore fields."

After removing vegetation and unexploded ordnance from past conflicts, we discovered olive ridley turtles nesting on the north side of the site. Through Chevron, Angola LNG partnered with the Wildlife Conservation Society (WCS) to develop an areawide biodiversity action plan. This plan included a community-based monitoring and conservation effort to safeguard the turtles and their nests, as well as community education on the importance of preserving the marine turtle population. After two years, Angola LNG staff took responsibility for the program and today continue to manage more than 9 miles (14 km) of coastline.

#### **Monitoring Marine Mammals**

Marine animals, including coastal dolphins, West African manatees, offshore cetaceans and sea turtles, are increasingly under threat from activities such as overfishing and vessel traffic.

As we explore for energy resources along Angola's coast, we partner with local fishermen and biologists to monitor marine mammals during seismic operations and reduce potential disturbance from the sound waves used to detect oil and gas formations in the rock deep beneath the ocean floor. This monitoring involves continually watching for marine animals before and during seismic operations. The program also establishes an exclusion zone where operations are suspended when marine animals are spotted until they swim out of range. Chevron adheres to the Joint Nature Conservation Committee guidelines for minimizing the risk

#### Malongo Laboratory Gets Results

At our Malongo laboratory, 63 Angolan technicians test thousands of samples monthly to help protect water quality and ensure the integrity of our operations and the quality of our products.

Each morning, samples of produced water from our onshore and offshore facilities are analyzed to make sure they are within our specifications and regulatory limits.

Laboratory technicians test and certify Chevron products that are sold in Angola, such as crude oil and liquefied petroleum gas, as well as products used in our operations, such as jet fuel, diesel and kerosene.

The lab also is equipped to identify the source of crude oil spilled in water based on its "fingerprint." Because each type of oil is unique, the fingerprinting technique uses biomarkers to determine the oil's characteristics. A database helps match the oil to its source. Results are shared with the Ministry of Environment and the Ministry of Petroleum and then become public.

of injury and disturbance to marine mammals from seismic surveys.

In 2008, Chevron partnered with WCS to introduce passive acoustic monitoring in the south Atlantic Ocean to assess humpback whale breeding activity. This surveying technique resulted in the first complete documentation of the full migratory timing and seasonal presence of humpback whales that spend their winters off the Angolan coast. During this period, WCS was also able to document the presence of blue whales through recordings of their species-specific vocalizations. These recordings provided the first modern evidence of this endangered species off Angola since the 1970s.

Chevron is also collaborating with WCS to develop a more comprehensive assessment of marine mammals



**Above:** A team of employees and wildlife advisors from the Angola liquefied natural gas joint venture free a beached humpback whale at the mouth of the Congo River. The whale swam off into the ocean safe and unharmed. The ongoing protection of wildlife is the result of our commitment to preserve the biodiversity of the areas in which we operate.

farther north along the Atlantic coastline, where data on marine mammals are limited. Through these and other related studies, Chevron is helping to make available new information on vulnerable species in poorly researched areas.

"Establishing baseline information in this region will be valuable as Chevron looks to improve mitigation and monitoring based on scientific information. More broadly, the information on marine mammals will be helpful for improving our understanding of how important these areas are for whales and dolphins," said Howard Rosenbaum, Ph.D., director of WCS's Ocean Giants Program.

#### Reducing and Eliminating Flaring

To minimize our environmental footprint, we have been eliminating routine flaring of natural gas at several offshore oil and gas production fields. The Cabinda gas plant became fully operational in 2010 and reduced onshore flaring by 7 million cubic feet per day (mmcf/d). At the Chevronoperated Block O concession offshore Cabinda, where we have a 39.2 percent interest, a gas management project

completed in 2011 reduced flaring by 70 mmcf/d of natural gas. The project made modifications to flare and relief systems on 14 platforms in both the Takula and Malongo fields.

With startup scheduled in 2013, the \$10 billion Angola LNG project will capture and market offshore gas that is currently flared from producing blocks in Angola north and south of the Congo River Canyon. The Angola LNG plant is expected to receive 1 billion cf/d of natural gas for export and domestic use from a new 264-mile (425-km) network of offshore and onshore pipelines connected to areas that include the Chevron-operated Blocks O and 14 offshore Angola. Through Chevron's ESHIA process, the local Soyo community was engaged to help identify nonintrusive pipeline routes.

By 2015, a \$2 billion investment at our North and South Nemba fields off the Cabinda coast includes plans to inject gas for enhanced oil recovery and to eliminate routine flaring.

#### **Supporting Livelihoods**

Fishing is a primary means of subsistence in Cabinda. In 2009, we launched

a program to strengthen the capabilities of small-scale fishermen to increase the amount of their catch. The program is conducted in partnership with the Angolan Ministry of Fisheries and World Vision International, a global humanitarian organization working to alleviate poverty. More than 3,000 fishermen and fish traders from Cabinda Province received training, tools and equipment. Another program helps fishermen reduce operating costs through access to credit, equipment and supplies. So far, 113 fishermen and 474 fish traders received microloans.

"We collaborated with Chevron and its partners to help protect fishermen's rights to sustainable livelihoods. We also worked to design and fund programs that allow fishermen to improve deep-sea fishing techniques and maintain equipment," said Clemente de Oliveira Paulo of World Vision. "These projects will help Angolans now and in the future."

Historically, local fishermen have at times raised concerns about water quality and reduced fish levels.

"We recognize that perceived negative impacts to fish will translate to a high level of concern from communities and regulators," said Daniel Joao, Health, Environment and Safety supervisor for Cabinda operations.

Since 2006, we have been assessing water quality and fish health in Cabinda to respond to community concerns. The program involves monitoring through the collection of water and sediment samples and the analysis of fish tissue. The analysis, conducted by an independent U.S. laboratory, assesses whether trace contaminants related to oil and gas operations pose a concern for human consumption or for the food chain. The analysis has found no such concern or link.

# Overview Economic Development

We believe that enhancing economic conditions improves the quality of life for people in the communities near our operations.

Working with governments, development agencies, research institutions and other non-governmental organizations (NGOs), we establish programs that engage the local workforce, advance vocational training, and support local small businesses and suppliers.

**LOCAL WORKFORCE** – In Australia, the Gorgon and Wheatstone natural gas projects, at peak construction, will generate as many as 16,500 jobs.

**VOCATIONAL TRAINING** – In Indonesia, we built and sponsored two polytechnic schools to train Indonesian students for jobs in the industrial sector. More than 1,100 students have graduated from Politeknik Caltex Riau, the province's first polytechnic university. In 2012, the second class of students graduated from Politeknik Aceh, bringing the total number of graduates at that school to 314.

**SMALL BUSINESS AND SUPPLIER DEVELOPMENT** – In 2012, Chevron spent more than \$60 billion on goods and services around the globe. We are committed to supporting economic growth by providing contracts and purchase orders associated with our development projects to local businesses.

We also pursue thought leadership in this arena. In 2011, Chevron and the Center for Strategic and International Studies (CSIS) launched the Project on U.S. Leadership in Development, which is designed to generate innovative thinking on how U.S. public and private sectors can partner with NGOs and foreign governments to advance international economic and community development. Our partnership with CSIS includes the Chevron Forum on Development, a public dialogue on pioneering ideas and approaches to economic development, with a special focus on the business sector.

For more details, please visit Chevron.com/EconomicDevelopment.



#### Australia

### Contributing to Economic Growth



Chevron's \$29 billion Wheatstone natural gas project is transforming the remote coastal community of Onslow in Western Australia, bringing new residents and investment in the town's infrastructure and services. Our partnerships with the community, various levels of government and local suppliers will help shape the town's future as we develop vast natural gas resources offshore.

The remote town of Onslow is located in the Pilbara region on Australia's northwestern coast, more than 800 miles (1,287 km) from Western Australia's capital city of Perth. Onslow's population usually peaks at approximately 900, when winter visitors come to escape the colder southern climates.

"Onslow is off the beaten track," said Sean Clarke, a Chevron contractor who has lived and worked in the region for 15 years. "Amenities here are limited; and the area outside of town is barren, but beautiful." It is here that Chevron has become part of a fundamental transformation. The Wheatstone Project will extract natural gas to fuel growth and promote energy security in Australia and beyond. The project includes the country's largest offshore gas processing platform and is expected to increase domestic gas supplies by 20 percent, providing an important new energy source for consumers in Western Australia. It will also add nearly 9 million tons of liquefied natural gas (LNG) annually to the rapidly developing Asian market.

Since the project began, Chevron has been working with an array

**Above:** Chevron is supporting the community's vision of Onslow being a thriving place in which to live and work.

of stakeholders to promote responsible development. "We recognize our responsibility to the Onslow community, and we are working with our partners to maintain safe and environmentally responsible operations," said Eric Dunning, general manager of the Wheatstone Project.

### Continuing a History of Responsible Operations

The Wheatstone Project is emerging at Ashburton North, just 7.5 miles (12 km)

west of Onslow, and continues Chevron's longstanding ties to Australia.

In 1941, we began marketing petroleum products in the country and have been developing oil and gas there since the 1950s. Our nearly 50-year track record of producing oil on Barrow Island, 31 miles (50 km) offshore Western Australia, shows our commitment to responsible development. Barrow Island is a Class A nature reserve, the most highly protected type of public land in Western Australia.

"Chevron has demonstrated that with proper management, development and conservation can coexist," said Roy Krzywosinski, managing director of Chevron Australia Pty. Ltd.

Just over three years ago, Chevron began developing Gorgon, the world's largest natural gas project. The vast natural gas resources lie 43.5 miles (70 km) northwest of Barrow Island. At peak construction, Gorgon will provide direct and indirect employment for approximately 10,000 people.

#### Offering Economic Opportunity

Similarly to Gorgon, the Wheatstone Project is expected to create as many as 6,500 direct and indirect jobs, according to independent estimates, 3,500 of which will be construction jobs.

"Wheatstone is creating enormous employment and industry participation opportunities for the state and transforming Onslow, as well as cementing Western Australia's status as a major global energy provider," said Western Australian Premier and State Development Minister Colin Barnett.

Thousands of jobs are being offered through the project's contractors, from carpenters and crane operators to scaffolders and riggers. Many of these opportunities include training and apprenticeship programs.

"We will continue to work closely with government and other stakeholders to enhance regional employment and training, indigenous employment, and opportunities for small business to participate in the project," said Dunning.

Since construction began, many local companies have grown. Already, we've committed more than \$8 billion in contracts and purchases to Australian businesses. The Onslow-based civil engineering construction company NTC Contracting has grown from 40 to almost 70 employees, largely because of work for Wheatstone.

Another Pilbara company benefiting from the project is Raw Hire, owned and operated by Sean and Lisa Clarke. The company supplies vehicles to meet Chevron's specialized needs.

Chevron is providing

# more than \$250 million

toward community infrastructure projects in Onslow

"We started the company in 1998 with one vehicle. It's been a process of doubling our fleet every year, and there are no signs we'll be slowing down," said Sean Clarke. Today, Raw Hire has a staff of 40 and more than 1,300 vehicles in its fleet of four-wheel-drive trucks, buses and water carts. The company provided 40 vehicles for Wheatstone, with more planned for delivery.

#### Contributing to Onslow's Growth

Chevron began implementing its Environmental, Social and Health Impact Assessment (ESHIA) process



**Above:** Lara Shur, Telethon Speech and Hearing Centre manager of Audiology Services, treats a young Pilbara patient.

#### Improving Hearing

Chevron is partnering with Telethon Speech and Hearing Centre for Children to offer a mobile "Earbus" clinic in the Pilbara region of Western Australia, a program that screens infants to 12-year-olds for middle-ear health and basic hearing.

Hearing impairment in Australia affects one in six citizens. Aboriginal Australians experience ear disease and associated hearing loss at up to 10 times the rate of other Australians, according to a 2010 government study. Research conducted in 2012 in the western Pilbara region found that 60 percent of the 600 Aboriginal children given a hearing test were unable to pass.

"Early intervention in Aboriginal child health – particularly when there is a threat of hearing damage – can assist with school retention, education and training, potentially helping create life-changing outcomes for children with middle-ear infections," said Peter Fairclough, Chevron Australia general manager of Policy, Government and Public Affairs.

Today, the Pilbara program is screening approximately 720 children annually, which represents about 48 percent of the indigenous child population in the area. Children with confirmed problems are referred to the Earbus general practitioner.

Telethon Speech and Hearing Centre former CEO Paul Higginbotham added, "Chevron's investment in the future of Aboriginal children has allowed us to deliver ear health services and support into the region with confidence." for Wheatstone in 2009. The ESHIA process is Chevron's corporate requirement for all new major capital projects. It is used to identify potentially significant negative impacts and to develop plans for avoiding, minimizing and mitigating them. Stakeholder engagement throughout the life of a project is central to the ESHIA process.

From March 2009 through March 2010, we consulted more than 340 stakeholders about aspects of the community and its needs. We continue to maintain regular communication with Onslow residents.

The Wheatstone Project is expected to create as many as

6,500

direct and indirect jobs



Above: Jamie Paterson works on the Wheatstone LNG project's desalinated-water pipeline. Seawater is used for construction activities and to supply the desalination plant, which provides potable water for the workforce. More than 1,200 workers are now onsite building the project's basic infrastructure.

After this extensive engagement process, Chevron's Wheatstone Project and the Western Australian state government agreed that Chevron would provide more than \$250 million toward community infrastructure projects, including upgrading Onslow's roads, airport, power grid and water system as well as its health clinics, schools and recreational facilities. Additional plans include funding new emergency service facilities, a desalination plant to improve the local water supply and a new gas-fired power plant.

Chevron has also committed \$20 million to the Onslow Community Development Fund, which received an additional \$10 million state government contribution. The fund will be used to improve existing infrastructure and sporting and youth facilities, in support of the community's vision for Onslow.

Minister for Regional Development Brendan Grylls said the Onslow infrastructure improvements are vital to address the needs that will come from the projected population growth. "This doesn't mean just water and power – the community needs recreational facilities, services and amenities that make a place enjoyable to live in," said Grylls. "We want the people who move to Onslow to have a fantastic lifestyle, and the Onslow Community Development Fund will play a big part in achieving this."

Longtime Onslow resident Peta Wilson believes the changes to Onslow during the next five years will improve the community. "I see Onslow becoming a good place for families, better than it ever was before," she said.

#### **Enhancing Community Partnerships**

In 2010, Chevron reached an agreement with the Thalanyji, the traditional landowners who live in the Onslow area. The agreement is a road map for how Wheatstone can create educational, employment, contracting

and business opportunities for Aboriginal people.

A range of Thalanyji businesses, from pipe laying to security and site services, have been awarded subcontracts on the Wheatstone Project, which has generated further local job and training opportunities.

"Our commitment to Aboriginal employment and partnerships has resulted in tangible outcomes, such as additional health workers in the region, and Aboriginal trainees and apprentices joining our operations," said Krzywosinski.

In September 2011, six Onslow residents, including five Aboriginal students, completed a work preparation program at the local job training center and have since begun work on the Wheatstone Project. Student James Tittums said he became involved in the training program to further his work options in town.

"I wanted a good local job in Onslow," he said. "I've secured this concreting job now on the Wheatstone Project, so my skills will be put to good use. But, I also want to continue training while on the job."

Chevron is also supporting educational programs in Onslow that improve student retention and increase literacy and math skills.

"The Wheatstone Project has a life span of more than 40 years, and we invest in partnerships with an aim of delivering lasting outcomes for the community," Krzywosinski said.

Meet one of our local suppliers in Australia at Chevron.com/CR2012/Australia.



#### Health

### Partnering for an HIV/AIDS-Free Africa



In Angola, Nigeria and South Africa, Chevron and its partners are combating HIV/AIDS to improve the health of the company's workforce and local communities. Our commitment to fighting the virus continues with a focus on eliminating mother-to-child transmission of HIV in these countries by 2015.

Dr. Chinwe Okala, Chevron's public health physician in Nigeria, has colleagues and friends living with HIV/AIDS and has lost people close to her because of the disease. Each day she works to stem the impact of HIV/AIDS on employees and community members in a country where mother-to-child transmission of the disease is a stark reality.

"In Nigeria, there are a disproportionate number of women living with HIV who are giving birth to HIV-positive babies. Chevron thinks that's unacceptable because it's preventable, and we are fighting it with programs involving testing, treatment, education and support," said Okala. Chevron partners with global, regional and local organizations to combat HIV/AIDS and implement programs in communities where we operate. We have been part of the fight against HIV/AIDS since 1986, when we joined 13 other companies in our home state of California to promote education and reduce stigma in the workplace.

In the 1990s, we expanded our efforts internationally, and in 2005, we became the first oil and gas company to implement a global HIV/AIDS policy for its employees. From 2008 to 2013, we will have invested more than \$29 million in HIV/AIDS-related programs in Angola, Nigeria and South Africa.

Above: To support economic development for rural women in South Africa, Chevron partnered with USAID and the Small Enterprise Foundation to fund the Intervention With Microfinance for AIDS and Gender Equity.

In 2012, we announced an initiative to aggressively combat crisis-level mother-to-child transmission of HIV in Nigeria, Angola and South Africa by partnering with nongovernmental organizations (NGOs), such as the Business Leadership Council; Pact; mothers2mothers; and the Global Fund to Fight AIDS, Tuberculosis and Malaria. These partnerships are part of our \$20 million commitment made in June 2011 at the United Nations High-Level Meeting on AIDS to support

the global plan to eliminate HIV infections among newborns by 2015 and keep their mothers alive.

"This is not a battle any of us can win alone. But together, we stand a chance," said Rhonda Zygocki, Chevron executive vice president for Policy and Planning.

The risk of mother-to-child transmission is an unfortunate reality in Nigeria, Angola and South Africa. Reports by UNAIDS, the Joint United Nations Programme on HIV/AIDS, reveal the challenges facing these countries. South Africa has the largest number of people living with HIV in the world, totaling 5.6 million HIV-positive people in 2009. South Africa's 2012-2016 National Strategic Plan on HIV, STIs and TB reveals that one in five pregnant South African adolescents is HIV-positive. With approximately 3.4 million people living with HIV, Nigeria has the second-largest number of people living with HIV/AIDS in the world, and approximately 72,000 babies annually are born HIV-positive. In Angola, an estimated 7 percent of the country's HIV cases are caused by mother-to-child transmission.

Our company programs have made a remarkable impact. For eight years in Angola and 12 years in Nigeria, we have had no reports of mother-to-child transmission of HIV among our employees or their qualified dependents.

Our Workplace Wellness HIV/AIDS program in Nigeria has reached approximately

20,000

employees and community members



Above: A Chevron physician counsels a mother before her baby is tested for sickle cell anemia. Screening, testing, diagnosis and treatment for the disease start with parental education.

"Chevron was one of the first companies to understand that stopping babies from being born with HIV is the best return for investment," said Michel Sidibé, executive director of UNAIDS and undersecretary-general of the United Nations. "They understood that we will be able to completely stop the epidemic if we come together."

#### **Expanding Care**

To address mother-to-child transmission of HIV at Chevron-owned and -operated clinics in African communities, we are expanding care facilities and providing doctors, nurses, midwives and psychologists.

At our Angola clinics, 169 professionals focus on the health and well-being of our employees and their dependents. From 2011 to 2012, the clinics treated more than 140,000 patients. And in four Nigerian states, we donate essential drugs to five hospitals, two of which specialize in maternal and child care. We also built and donated a center at St. Kizito Clinic in Lekki, Lagos, to help fight infections in HIV/AIDS patients.

"Our employees and their families are more knowledgeable about the disease and want to know their status. If needed, they can get immediate medical assistance," said Dr. Judith

# Model Health Program to Fight Sickle Cell Anemia

Chevron partnered with the Republic of Angola, Baylor College of Medicine and Texas Children's Hospital in 2011 to create Angola's first comprehensive program to screen and treat newborns for sickle cell anemia. Sickle cell disease is an inherited disorder that causes susceptibility to infection, hemolytic anemia, sporadic blockage of blood vessels and organ damage. In Africa, no universal screening program for newborns exists.

"In many countries in sub-Saharan Africa, sickle cell is a major contributor to child mortality, perhaps accounting for 20 or 25 percent of all deaths of children under five years of age," said Dr. Mark Kline, physician in chief at Texas Children's Hospital. "In the past, several programs without government support haven't worked. In this case, the government, the Ministry of Health, and the First Lady of Angola were all behind the initiative. Chevron provided the catalytic funding, and without Chevron's support, this program wouldn't have gotten off the ground."

Chevron is providing \$4 million over four years for the Angola Sickle Cell Initiative. The program began testing in July 2011 at two large maternity hospitals in Luanda, which each have 50 to 100 births per day. Over 18 months, the pilot program screened more than 33,000 babies, resulting in approximately 7,000 testing positive for the sickle cell trait. And 269 children have been referred for treatment of sickle cell disease. Angolans do the testing, laboratory work and clinical work.

In addition to testing the babies, medical staff educate families about sickle cell disease. Babies with the disease begin receiving simple, cost-effective lifesaving treatments involving immunizations and penicillin to protect them against lethal bacterial infections.

The program is considered a model that can be replicated throughout Africa and applied to diagnose other diseases.

"The pilot program shows that comprehensive care can save lives," said Dr. Patrick McGann, assistant professor of pediatrics at Baylor College of Medicine.

Aguiar, Chevron clinic superintendent in Malongo, Angola.

Chevron supports the participation of doctors in Baylor College of Medicine and Texas Children's Hospital's Global Health Corps who provide care for mothers and children and train hundreds of health professionals in Angola and Liberia. The doctors focus on prevention, treatment and research for HIV/AIDS, sickle cell anemia, malaria, cancer and other diseases.

#### **Education Is Critical**

We believe that employee awareness is critical to combating HIV/AIDS. In Angola and Nigeria, we train employees as peer educators to encourage their colleagues and qualified dependents to know the facts of the disease and get tested.

Chevron supplies baby formula and provides psychologists to work with new mothers. We also encourage confidential, voluntary testing for employees and qualified dependents, and we emphasize that there are no negative repercussions for getting tested and seeking treatment.

"In the past, in South Africa, many people struggled to talk about HIV/AIDS," said Miranda Anthony, social investment manager for Chevron South Africa. "Our partnerships are helping communities face this struggle and create hope so they understand that the virus is not the end of the world."

#### Broadening Community Partnerships

Chevron is advancing local-partnership models in South Africa, Nigeria and

facts of the disease and get tested. models in South Africa, Nigeria and

**Above:** To help fight tuberculosis and other infections common to HIV/AIDS patients, Chevron and its Agbami Field partners built seven chest clinics across Nigeria.

"Special attention is being paid to HIV-infected mothers who could transmit the disease through breast-feeding. In Angola, surveys found that because of cultural prejudice, mothers were afraid to not breastfeed their babies," said Dr. Huma Abbasi, general manager of Chevron's Health and Medical department.

Angola. We collaborated with the Western Cape Department of Social Development, the nonprofit Heavenly Promise and community leaders to establish the Du Noon Community Home-Based Care Centre, which provides meals and services for homebound people with HIV/AIDS.

We are also partnering with mothers2mothers, a sub-Saharan African NGO, to establish a mentor program in Nigeria. According to Dr. Mitchell Besser, medical director and co-founder of mothers2mothers, the staff is made up of former patients who found out they were HIV-positive and were fearful about their health and the health of their babies.

"When they become mentor mothers, they're employed, they have economic opportunities, and they become empowered in their households and their communities. They have opportunities that they may never have had before," he said.

We also approach community education by partnering with Nigeria's National Agency for the Control of AIDS to mentor small and medium-size enterprises (SMEs) to complement national efforts in response to the HIV pandemic. We started with 10 SMEs in Lagos in 2010, and in 2012 extended the program to 20 new SMEs in the Federal Capital Territory, Kogi and Nasarawa states. Over 10 months, there has been a 64 percent increase of SME and community member participation in HIV counseling, testing and treatment referrals.

We are supporting efforts of the Business Leadership Council, a private-sector initiative focused on ending transmission of HIV from mothers to children by 2015.

Additionally, we are partnering with the nonprofit Pact to establish educational programs in Nigeria's Bayelsa State. "If a mother never knows she is living with HIV, she can do little to prevent infecting her baby," said Mark Viso, Pact's president and CEO. "That has to change, and Chevron is helping make that change possible."

■ Meet Dr. Huma Abbasi, general manager of Chevron's Health and Medical department at Chevron.com/CR2012/Health.

#### **Executive Interview**

### On Addressing Health Issues



Rhonda Zygocki Executive Vice President Policy and Planning

# What is the role of multinational corporations in addressing public health issues?

Multinational corporations such as Chevron recognize that our success is tied to the health and prosperity of the countries where we operate. When public health issues put employee productivity and community wellbeing at risk, it is a business issue that demands action.

We can play unique roles in addressing public health issues because of our size, global experience and long-term presence in the developing world.

First, we must be role models in addressing workforce health issues. In 2005, Chevron was the first oil and gas company to institute a global HIV/AIDS policy for employees.

Second, multinational corporations can play a role in convening health-related partnerships with community organizations and offering approaches to address local health concerns that have proven successful in other areas of the world.

# How does Chevron address these issues?

Our approach is grounded in policy, partnerships and perseverance.

This starts with a corporate policy to support employees. Some of our largest operations are located where the grip of AIDS is the strongest. We educate our entire workforce about prevention and testing for HIV/AIDS, and we provide access to treatment and care.

We partner with global, national and local organizations, as well as host governments, to promote the health and well-being of the communities near our operations.

Our clinics in Angola have treated 140,000 employees and community members in just the past two years. We partner with universities and hospitals to expand pediatric health care to medically underserved populations in Liberia. Since 2008, we have invested more than \$60 million in partnerships and programs related to HIV/AIDS, malaria and tuberculosis.

And we sustain our commitment. We have been fighting AIDS for more than 25 years.

#### What progress has Chevron helped make in combating disease?

Change is not only possible; it's happening. In our company clinics and with our partners, we've produced remarkable results.

There have been no reports of motherto-child transmission of HIV among our employees or their qualified dependents during the past eight years in Angola and 12 years in Nigeria.

To date, more than 11,000 employees have taken advantage of tools in our cardiovascular health program. More than 1,500 participants have collectively decreased their risk of developing coronary heart disease in the next 10 years by an average of 10 percent.

Our sickle cell anemia partnerships in Angola are saving lives – in the first 18 months of the program, 33,000 babies were screened and 269 treated.

This progress inspired our latest partnership. In 2011, we joined the global fight to eliminate motherto-child transmission of HIV by 2015. We hope our experience inspires others to do the same.

### **Progress Update**

Our partnerships and programs benefit our operations and local communities. Following are 2012 updates on regions covered in last year's report.



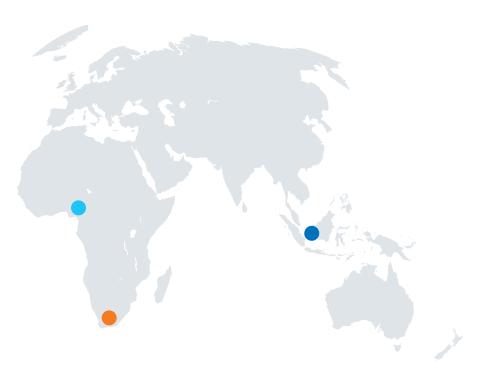
**Above:** In the province of La Guajira, Colombia, Chevron initiated special training and marketing programs and provided materials for these works of art produced by Wayúu women.



Chevron has a history of investing in Colombian communities near our gas production facilities in La Guajira to help people create a better future. We continue to support the Laachon Mayapo Ethno-Educational Center, which provides education to more than 1,200 children of the region.

In 2012, we collaborated with the national oil company, Ecopetrol, and other organizations to continue working in identified areas of need in Wayúu communities. Through our partnerships, we help find and maintain water sources, fund educational and health programs, provide training in sustainable agriculture and fishing, encourage an emerging tourism industry, and support small businesses. We have maintained our support to more than 640 fishermen near the Manaure municipality through technical training and financial assistance.

Supporting and protecting the Wayúu heritage was also a major priority for us in 2012. Chevron continued to provide training and marketing support to more than 600 Wayúu weavers, who produce colorful handmade bags, hammocks and blankets. Chevron endorsed the Wayúus exhibiting for the first time in the Círculo de la Moda de Bogotá, a major fashion event.



### U.S. Northeast

To share expertise and improve practices for developing natural gas from shale, our Appalachian/Michigan business unit (AMBU) in 2012 hosted more than 150 technical experts at an international forum in Pittsburgh, Pennsylvania.

In Fayette County, Pennsylvania, and Marshall County, West Virginia, we formed advisory councils to inform citizens about our operations and listen to concerns. We gave drill site tours and presentations to community leaders, media and government officials.

AMBU reuses 100 percent of the flowback water, 100 percent of drilling water, and 80 percent of brine generated from producing wells. Overall, AMBU is reusing 96 percent of all its water and is on track to achieve its goal of 100 percent reuse.

In March 2013, Chevron became a founding member of the Center for Sustainable Shale Development, which seeks to certify compliance with more stringent operation standards in Appalachia. A coalition of energy companies, environmental organizations and philanthropies established the center, the first of its kind in the country. To learn more, please view Chevron.com/MarcellusBrochure.

### Nigeria

Chevron provided seed-funding in 2010 for the Niger Delta Partnership Initiative (NDPI) Foundation, which was established to help alleviate poverty and promote peace in the region by building public-private partnerships in four focus areas: economic development, capacity building, peace building, and analysis and advocacy.

In 2012, NDPI opened the Economic Development Center in Warri as a coordinating hub for development activity. Three pilot projects were launched to create jobs and increase income for Niger Delta residents within the aquaculture, cassava oil and palm oil sectors. Programs emphasize coordination between farmers, producers, government agencies and banks.

NDPI's first Niger Delta Development Forum brought together over 180 participants from the government, private sector and development community to discuss measures to reduce poverty and promote economic development, capacity building and peace building.

Chevron has endowed the NDPI Foundation with \$50 million over five years, 2010 to 2014. NDPI has also generated an additional \$50 million in funding commitments from other donor partners.

#### South Africa

The Chevron Cape Town Refinery, working with Northlink College, is addressing the skilled-labor shortage in South Africa by funding training in nationally accredited trade-skills programs. In 2012, 71 Western Cape residents were trained in skills ranging from welding to mechanical fitting. These talents are needed in the local community and help the refinery find and hire qualified workers during periodic refinery maintenance shutdowns. Thirty-two individuals have since been hired to work on shutdowns in 2012 and 2013, and eight graduates have been employed by one of Chevron's main contractors. Three graduates received direct contracts with Chevron.

#### Indonesia

In late 2011, Chevron Geothermal Salak, in collaboration with the Mount Halimun-Salak National Park Authority, local governments and the Indonesian Biodiversity Foundation, launched the Green Corridor Initiative. The initiative aims to empower local communities in restoring a critical ecological zone in the degraded forest – the "green corridor" - that connects Mount Salak and Mount Halimun ecosystems and serves as a wildlife crossing and water catchment area. The initiative plans to plant 250,000 trees over five years. In 2012, our employees and community members planted 20,000 trees, adding to the initial 5,000 trees planted in 2011. From January to March 2013, we planted 20,000 more trees in the forest corridor.

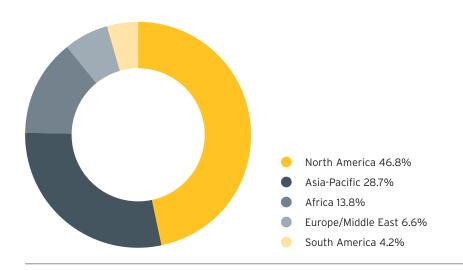
Also in 2012, we facilitated local training programs in integrated farming as an economic alternative to support conservation efforts for 40 farmers. We plan to broaden the program in 2013 by establishing an integrated farming and learning center to help ensure the sustainability of the farmers' efforts.

#### Performance Data

Our people believe that success is driven by operating with excellence in everything we do. We provide reliable and affordable energy with an unyielding commitment to personal safety, process safety and environmental stewardship – by doing every task the right way, every time.

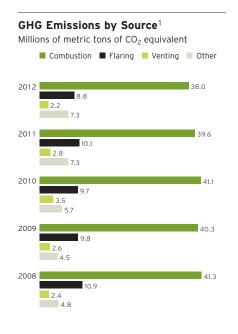
## Global Geographic Breakdown of Employees at Year-End 2012

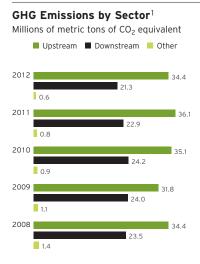
At year-end 2012, Chevron's worldwide employee staffing was 58,286 (excluding 3,653 service station employees). This represents an increase of 1.6 percent over the previous year. U.S. workers numbered 27,471 and approximately 10.4 percent were represented by unions.





#### Performance Data





## **Total GHG Emissions by Type**<sup>1,2</sup> Millions of metric tons of CO<sub>2</sub> equivalent

		G		
	Direct	Indirect	Credits	Net
2012	58.5	-2.2	0.0	56.3
2011	61.6	-1.8	0.0	59.8
2010	63.1	-2.9	0.0	60.2
2009	60.3	-2.4	-0.9	57.0
2008	62.7	-2.4	-1.0	59.2

#### **Energy Performance**<sup>3</sup>

Percentage improvement since 1992 baseline



#### Air Emissions 4,5 Metric tons ■ Upstream ■ Downstream ■ Other VOCs 2012 180 582 2011 275,963 2010 262,307 2009 274.146 221,734 $SO_{X}$ 2012 122,827 154,239 2010 154,949 151 861 2009 2008 125,036 2012 146,386 132,173 2011 134,761 2010 2009 121,914 134,785

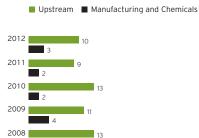
### Air Emissions by Sector<sup>4,5</sup>

Metric tons

		Upstream	Downstream	Other
VOCs	2012	157,349	23,195	38
	2011	245,806	30,132	26
	2010	229,113	33,174	21
	2009	234,243	39,871	32
	2008	201,209	18,648	1,878
$SO_X$	2012	114,606	8,193	28
	2011	140,355	13,849	35
	2010	137,005	17,902	42
	2009	135,393	16,339	130
	2008	97,731	18,496	8,810
NO <sub>X</sub>	2012	138,902	7,364	120
	2011	122,848	8,373	952
	2010	121,627	12,155	979
	2009	109,320	12,453	142
	2008	95,717	12,282	26,785

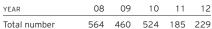
## Average Oil Concentration in Discharges to Water <sup>6</sup>

Parts per million

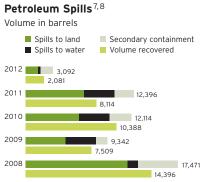


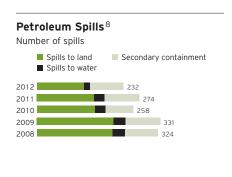
#### Fines and Settlements

Number of environmental, health and safety fines paid and settlements entered into









Footnotes are on page 40.

#### **Environmental Performance Data**

The charts and text on pages 36 through 38 describe Chevron's environmental performance.

Chevron acquired Appalachian/Michigan operations (formerly, Atlas Energy, Inc.) in 2011, and we added these operations to our Upstream and Gas portfolio. At the time of the acquisition and in years prior, however, environmental performance measurement systems were not fully in place. Thus, our 2011 Corporate Responsibility Report, published in May 2012, could not report performance for these operations. In 2012, however, Chevron established environmental performance measurement systems for Appalachian/Michigan operations, and this 2012 Corporate Responsibility Report includes their environmental performance data.

#### Greenhouse Gas (GHG) Emissions

At Chevron, we are taking significant steps to address greenhouse gases (GHGs). The use of fossil fuels to meet the world's energy needs contributes to an increase in GHGs – mainly carbon dioxide ( $\mathrm{CO}_2$ ) and methane – in Earth's atmosphere. We made a long-term commitment to improve energy efficiency in our day-to-day activities, which will help us manage our carbon emissions. We inventory our emissions and use innovative technologies to continually improve the efficiency of energy use in our operations. We also incorporate GHG considerations into our capital projects. For more details, visit Chevron.com/GHGManagement.

In the Carbon Disclosure Project's (CDP) 2012 questionnaire, we ranked in the top tier of the energy sector. Our score of 88 was two points higher than the previous year's, revealing that we continue to improve our data quality and the transparency of our GHG reporting. For additional details on Chevron's climate change program and CDP reporting, visit Chevron.com/ClimateChange.

In 2012, emissions were 56.3 million metric tons of  $\mathrm{CO}_2$  equivalent, better than our goal of 60.5 million metric tons. Normal production levels and emissions are expected to resume in areas where disruptions and maintenance occurred in 2012, and emissions are expected from new facilities and facility expansions coming on line in 2013, such as the acquisition of assets in the Delaware Basin. We will seek emissions reductions through energy efficiency improvements and reduced flaring and venting.

Adjusting for divestitures and acquisitions, Chevron's chosen base-year emissions in 2010 would have been 56.6 million metric tons. Therefore, Chevron's 2012 emissions are a decrease of 0.3 million metric tons compared with the base

year. Our emissions goal for 2013 is 57.5 million metric tons of  $CO_2$  equivalent.

Combustion of our products resulted in emissions of approximately 364 million metric tons of  ${\rm CO_2}$  equivalent in 2012, approximately 8 percent less than the 396 million metric tons emitted in 2011. More details on flaring reduction and products combustion are provided in footnote 1 on page 40.

#### **GHG Emissions Intensity**

Our 2012 GHG emissions intensity was 34.2 metric tons of  $CO_2$  equivalent per 1,000 barrels of net oil-equivalent production from Upstream operations, down from 34.9 metric tons in 2011. Our Downstream intensity was 36.4 metric tons of  $CO_2$  equivalent per 1,000 barrels of crude oil refinery feed, down from 36.8 in 2011.

#### **Air Emissions**

Volatile organic compound (VOC) emissions decreased by 35 percent from 2011, largely due to the installation of abatement devices in Sumatra, Indonesia.

Sulfur oxide  $(SO_X)$  emissions decreased by 20 percent from 2011. This is largely due to Saudi Arabia/Partitioned Zone operations combusting less production gas than in past years.

Nitrogen oxide ( $NO_X$ ) emissions increased by 11 percent from 2011. This is partially due to improved  $NO_X$  emissions estimating methods for combustion sources associated with Thailand and Bangladesh operations.

#### Oil Discharges to Water

Chevron facilities make controlled wastewater discharges to surface water. In many cases, the discharges are treated, and in all cases they comply with regulatory limits on quality and oil content. Chevron reports the total cumulative amount of oil discharged to surface water, excluding spills, which are reported separately.

In 2012, Chevron operations recorded a cumulative discharge of 1,564 metric tons of oil to surface water, a comparable amount to 2011. The chart on page 36 shows that oil concentration in water discharges for Upstream and Gas and for Manufacturing and Chemicals were reported at similar levels in 2012 to those reported in 2011. The general trend over the past five years shows a reduction in oil discharged to surface water because of continuing improvements in Chevron's overall wastewater management.

#### **Hazardous Waste**

In 2012, Chevron operations generated 931,000 metric tons of hazardous waste, a decrease from the 1.01 million metric tons reported for 2011. Manufacturing hazardous-waste generation decreased in 2012 due to the divestment of the Pembroke Refinery and reduced tank-sludge disposal at the Pascagoula Refinery. Upstream and Gas hazardous-waste generation decreased due to fewer spills from Sumatra, Indonesia, operations. Fewer spills in Indonesia resulted in less contaminated soil, which is classified there as hazardous waste. The 2012 hazardous waste disposed of was 553,000 metric tons. The 2012 amount that was recycled, reused and recovered was 385,000 metric tons.

Waste amounts are quantified using methods required or recommended by regulatory agencies or authorities where applicable. In other instances, similar methods are used, including direct measurement onsite, direct measurement by transporters at the point of shipping or loading, direct measurement by waste-disposal contractors at the point of disposal, and engineering estimates or process knowledge.

Chevron follows the regulatory definition of hazardous waste and reports all amounts of hazardous waste as required. In some cases, applicable regulations may define a *de minimis* quantity below which small waste streams may not be deemed significant enough to be considered as hazardous waste. As Chevron follows the regulatory definition of hazardous waste where this applies, these same *de minimis* quantities are used in reporting.

#### **Petroleum Spills**

We continually review and improve systems to prevent spills. These systems include design and maintenance of equipment to assure mechanical integrity and training of personnel on correct procedures for operating equipment.

The number of petroleum spills and petroleum spill volume in 2012 was the lowest ever recorded for Chevron. In 2012, 232 petroleum spills released 3,092 barrels, a significant decrease compared with 12,396 barrels released by 274 spills in 2011. Approximately 46 percent, or 1,408 barrels, of the total volume was spilled to secondary containment in 2012. There were seven spills greater than 100 barrels in 2012, totaling 1,200 barrels.

Chevron uses a tiered approach to emergency response consistent with industry best practices. Chevron requires emergency response and business continuity plans that address all credible, significant risks identified by site-specific risk and impact assessments. Chevron also requires sufficient resources to execute these plans. Compliance with

these requirements is tested through operating units' annual self-assessment and, in cases of higher risk, through corporate audits. Response to smaller incidents is generally managed through operating unit plans and resources at the affected location.

Response to major incidents may require the use of expertise and resources beyond those of the affected facility. For this purpose, Chevron maintains a worldwide emergency response team. This team comprises approximately 200 employees who are trained in various aspects of emergency response and are available 24/7 to respond to a major incident at any of our operations. Team members represent a range of skill sets associated with spill and other incident response. They are medically cleared, trained in the incident command system and participate in regular exercises to maintain their skills. Three to four corporate-sponsored exercises are held annually at varying locations to test the ability of these teams and line organizations to respond to a major event. Response plans are updated to capture lessons learned from these exercises.

Chevron also maintains active membership in international oil spill cooperatives and access to expert external consultants and contractors. Chevron is a key member of the two largest global oil spill cooperatives – the Marine Spill Response Corp. and Oil Spill Response Ltd. Chevron is represented on the board of directors of these cooperatives.

Chevron maintains contracts with a wide range of spill response experts and organizations that can support us in areas that include incident management, wildlife management, oil spill and air dispersion modeling, toxicology, chemistry, firefighting, communications, shipping, and salvage. Some of these organizations also maintain stockpiles of spill response equipment.

Additionally, Chevron participates in trade association efforts to advance worldwide oil spill preparedness, including the Emergency Preparedness and Response Committee and the Spill Advisory Group of the American Petroleum Institute, and the Oil Spill Working Group within IPIECA, the global oil and gas industry association for environmental and social issues.

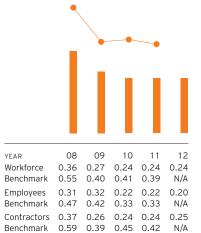
#### Fines Paid and Settlements Entered Into

Environmental expenditures were \$2.8 billion (\$1.1 billion capital expenditures, \$1.7 billion noncapital expenditures). 2012 environmental fines and settlements were \$91 million. This represents 3.1 percent of Chevron's total 2012 environmental expenditures. Health and safety fines and settlements accounted for approximately 0.011 percent, representing \$10,000, of the total fines and settlements.

#### Performance Data

#### Total Recordable Incident Rate9

Incidents per 200,000 work hours



#### Lost-Time Incident Frequency 9

Days Away From Work incidents and fatalities per million work hours



#### Days Away From Work Rate<sup>9</sup>

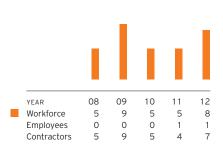
Incidents per 200,000 work hours



#### **Work-Related Fatalities**

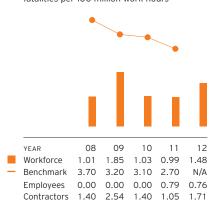
Number of fatalities

YEAR



### Work-Related Fatal Accident Rate<sup>10</sup>

Work-related employee or contractor fatalities per 100 million work hours



#### Motor Vehicle Safety<sup>11</sup>

Company vehicle incidents per million miles driven



#### **Global Diversity**

YEAR	11	12
Women in total workforce	23.4%	23.8%
Women represented at mid-level and above	12.4%	12.5%
Women and non-Caucasian men represented at senior executive levels	27.5%	26.9%

#### U.S. Equal Employment Opportunity Commission Statistics

YEAR	09	10	11	12
Minorities among total employees	34.9%	35.4%	35.9%	36.2%
Women among total employees	28.9%	29.3%	29.3%	29.7%
Minorities among executives and senior managers	11.2%	11.1%	11.6%	11.1%
Minorities among first- and mid-level managers	27.5%	27.4%	27.7%	27.9%
Women among executives and senior managers	14.4%	15.3%	16.3%	15.9%
Women among first- and mid-level managers	27.4%	26.9%	27.4%	28.1%
Minorities among professionals	31.4%	31.7%	31.8%	32.3%
Women among professionals	32.4%	32.8%	32.2%	32.0%

Footnotes are on page 40.

### **Process Safety** 12

In 2012, there were 74 loss-of-primary-containment incidents of significance (ANSI/API Recommended Practice 754 Tier 1) across the company, compared with 92 incidents in 2011. Of the 74 incidents, 60 occurred in Upstream and 14 in Downstream, which includes Manufacturing and Chemicals.

#### Notes to pages 36 through 40

1 Chevron continues to use the upgraded GHG and energy reporting system (CGERS), improved by adding reporting mechanisms for electronic reporting to the U.S. Environmental Protection Agency.

Overall, the decrease of 3.5 million metric tons of GHG emissions from 2011 to 2012 was driven by the divestment of the Pembroke Refinery and Alaska operations (2.2 million) and the Richmond Refinery's decreased production, which also had an impact on Shipping (0.6 million decrease). Decreases in production and related flaring in Angola also heavily contributed (0.5 million). Elsewhere, Indonesia converted venting to flaring, which decreased  $\mathrm{CO}_2$  equivalent emissions. Increased emissions due to increases in production generally offset the emissions reductions. Energy efficiency improvements continue to help slow the growth of emissions.

Chevron calculates product emissions based on total 2012 Upstream liquids, gas and coal production. The emissions factors used are from the American Petroleum Institute's Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry (2004, 2009). Based on the 30.3 billion metric tons of CO<sub>2</sub> emissions from worldwide fossil fuel combustion from the International Energy Agency's (IEA's) Key World Energy Statistics (2012), Chevron's product emissions represent 1.2 percent of global CO<sub>2</sub> emissions from combustion of fossil fuels.

The 2012 flaring and venting GHG emissions are based on a flare gas volume of 794 million cubic feet per day and a venting volume of 54 million cubic feet per day. Reduced flaring in Angola and Nigeria contributed to the 11 percent reduction in flare gas volume. Reduced venting in Indonesia was the primary driver for the 74 percent reduction in vented volume.

Chevron's GHG emissions data are reported on an equity basis for all businesses in which Chevron has an interest except as noted below. The following entities are not currently included in the Chevron corporate GHG inventory: Chevron Phillips Chemical Co., the Caspian Pipeline Consortium, the Chad/Cameroon pipeline joint venture, Caltex Australia Ltd.'s Lytton and Kurnell refineries, and other refineries in which Chevron has an equity interest of 16 percent or less. These are entities over which Chevron does not have full operational control or which do not generally follow Chevron's corporate GHG inventory protocol or a compatible protocol. Chevron continues to perform thirdparty verification of its GHG emissions to ensure the high quality of its reported data.

Chevron accounts for and reports its emissions of all six Kyoto GHGs – that is, carbon dioxide  $(CO_2)$ , methane  $(CH_4)$ , nitrous oxide  $(N_2O)$ ,

sulfur hexafluoride, perfluorocarbons and hydrofluorocarbons – from all direct sources of emissions. The company also accounts for and reports its indirect emissions of  $\text{CO}_2$ ,  $\text{CH}_4$  and  $\text{N}_2\text{O}$  from the import or purchase of electricity and steam, while also tracking for internal GHG performance management purposes the emissions of these gases associated with the export or sale of electricity and steam. In addition to direct and indirect emissions, the company estimates and reports the  $\text{CO}_2$ ,  $\text{CH}_4$  and  $\text{N}_2\text{O}$  emissions that would result from the combustion of the solid, liquid and gas products for sale by the company.

Chevron facilities estimate GHG emissions from all their sources and activities. A facility may exclude quantitatively insignificant, or *de minimis*, emissions from its sitewide GHG inventory if allowed by applicable regulations. Where GHG reporting regulations do not apply, Chevron guidelines allow for exclusion of a *de minimis* quantity of a site's GHG emissions from reported inventory when that facility demonstrates at least once every two years that the excluded amount remains below 3 percent of the sitewide amount.

Due to rounding, individual numbers may not sum to the total number.

- 2 Direct emissions come from sources within a facility. Indirect emissions come from electricity and steam that Chevron imports, less the emissions credits from electricity and steam that Chevron exports. Grid credits account for electricity that Chevron exports and that is produced more efficiently than electricity from the regional or national grid. Per industry best practices, beginning in 2010, Chevron no longer accounts for grid credits in its power generation emissions.
- 3 Chevron uses an energy index to measure energy efficiency improvements across its global operations. As of 2012, that index has shown a 34 percent improvement since 1992. The Chevron Energy Index is a measure of the energy intensity of its operations, based on the estimated improvement of energy technologies and operational performance. The total energy consumption of its operated assets in 2012 was 728 million gigajoules (or 690 trillion Btu), at a cost of \$6.8 billion.

Chevron is implementing new energy metrics in 2013 that will provide sector-specific (for example, Upstream, Downstream) estimation of actual energy use. These performance data are being reviewed this year for inclusion in future Corporate Responsibility Reports.

4 Volatile organic compounds (VOCs) are derived primarily from fugitive emissions from

- equipment (such as valves, pumps and compressors), flaring, venting and flashing gas. Nitrogen oxides ( $NO_X$ ) and sulfur oxides ( $SO_X$ ) are combustion byproducts.
- 5 2011 air emissions are restated in this report using site-specific data and improved air emissions estimating methods in IndoAsia operations and Asia South operations.
- "Other" includes Chevron Mining Inc.
- Due to rounding, individual numbers may not sum to the total numbers.
- 6 Segregated storm-water contribution is not included. Oil concentration is determined by the sampling of effluent streams. Upstream data in the chart represent Upstream and Gas operations.
- 7 Secondary containment volume, which is not released to the environment, is included in the total volume listed at the end of each bar.
- 8 Spills to land, water and secondary containment that are greater than or equal to one barrel are included.
- 9 American Petroleum Institute's Benchmarking Survey of Occupational Injuries, Illnesses, and Fatalities in the Petroleum Industry data are used as industry benchmarks. 2012 benchmark data on competitor-average performance were not available at the time of publication.
- 10 The International Association of Oil & Gas Producers' (OGP) Safety Performance Indicators (Report No. 2011s) data are used as industry benchmarks for Upstream operations. 2012 benchmark data on competitor-average performance were not available at the time of publication. In 2012, the work-related fatal-incident rate, as measured by the number of work-related incidents that led to at least one fatality per 100 million work hours, for employees was 0.76. The 2012 work-related fatal-incident rate for contractors was 1.22. Benchmark data © OGP.
- ${\tt 11}\ \ {\sf Data}\ {\sf include}\ {\sf catastrophic}\ {\sf and}\ {\sf major}\ {\sf incidents}\ {\sf only}.$
- 12 Loss-of-containment incidents are unplanned or uncontrolled releases resulting in consequences equivalent to those specified by the American National Standards Institute/American Petroleum Institute (ANSI/API) Recommended Practice 754.

Chevron achieved a rating of

100%

on the Human Rights Campaign Corporate Equality Index for the eighth consecutive year

# Nearly \$1.2 billion

has been invested in health, education and economic development programs over the past seven years Chevron partners with

## more than 90 schools

worldwide through its University Partnership Program



#### This index refers to:

- 2011 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), Version 3.1
- American Petroleum Institute (API) and IPIECA (the global oil and gas industry association for environmental and social issues) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, 2nd edition, 2010

For more information on GRI and API/IPIECA reporting guidelines, please visit globalreporting.org and ipieca.org.

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#### Terms of Engagement

This Assurance Statement has been prepared for Chevron U.S.A. Inc.

Lloyd's Register Quality Assurance, Inc. (LRQA) was commissioned by Chevron U.S.A. Inc., on behalf of Chevron Corporation (Chevron), to assure its processes used in the creation of the Corporate Responsibility Report (CRR) for the calendar year 2012.

Our terms of engagement were to review the processes for reporting health, environmental and safety (HES) performance indicators. This did not include verifying the accuracy of data and information reported.

LRQA has reviewed Chevron's reporting processes since 2008 (for the 2007 CRR).

#### Management Responsibility

Chevron's management was responsible for preparing the CRR and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the CRR in accordance with our contract with Chevron.

Ultimately, the CRR has been approved by, and remains the responsibility of, Chevron.

#### LRQA's Approach

Our verification has been conducted against the requirements of LRQA's Report Verification procedure. The objectives of the assurance engagement were to verify the integrity of the processes used for determining which material issues to report, and to evaluate consistency with the IPIECA/API/OGP Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2010).

To form our conclusions, the assurance was undertaken as a sampling exercise and covered the following activities:

- Visiting two Chevron Upstream and Gas operations in Australia and the United States and two Chevron Downstream operations in Singapore and Canada to assess local understanding and implementation of Chevron's HES reporting requirements.
- Visiting Chevron Upstream and Gas headquarters in Houston, Texas, and Chevron Downstream and Chemicals headquarters in San Ramon, California, to assess business-unit understanding and implementation of Chevron's HES reporting requirements.
- Visiting Chevron Corporation in San Ramon, California, to review data collection and checking processes.

- Interviewing key personnel to identify and gain an understanding of Chevron's reporting requirements.
- Reviewing the documented reporting requirements to validate consistency of scope, definition and reporting for each of the HES performance indicators.

#### Level of Assurance

The opinion expressed in this Assurance Statement has been formed on the basis of a reasonable level of assurance.

#### LRQA's Opinion

Based on LRQA's approach, Chevron's reporting process was effective in delivering HES indicators that are useful for assessing corporate performance and reporting information consistent with the IPIECA/API/OGP Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2010).

It should be noted that:

- Processes were in place to ensure that sites contributing to core HES metrics understood corporate reporting procedures and requirements.
- Methods used for calculating each HES performance metric were clearly defined and communicated.
- Chevron's reporting requirements for HES metrics were understood and carried out. Data collected at the site/local and business-unit levels were checked and aggregated into corporationwide metrics.
- Responsibility for annually reviewing and updating reporting guidelines was clear, with improvement in methodology regularly undertaken.

#### LRQA's Recommendations

Observations and areas for potential improvement were provided in a report to Chevron management. These recommendations do not affect our opinion.

Andrea M. Bockrath

On behalf of Lloyd's Register Quality Assurance, Inc. 1330 Enclave Parkway, Suite 200, Houston, Texas 77077 March 28, 2013

LRQA Reference: UQA4000679



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Due to the inherent limitations in any internal control, it is possible that fraud, error, or noncompliance with laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above, as the verification has not been performed continuously throughout the period and the verification carried out on the relevant internal controls was on a test basis. Any projection of the evaluation of control to future periods is subject to the risk that the processes may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The English version of this statement is the only valid version. The Lloyd's Register Group assumes no responsibility for versions translated into other languages.

#### Glossary

## Aa

American Petroleum Institute

#### Bb

#### **Biodiversity**

Refers to the diversity of life on the planet. It encompasses genera, species, habitats and ecosystems, and the processes that support them.

#### Cc

#### Capacity building

A key area of focus for Chevron's social investment efforts, which means targeting support toward programs that help individuals and institutions develop the skills, capabilities and expertise they need to succeed.

#### The Chevron Way

Explains our values: who we are, what we do, what we believe and what we plan to accomplish.

#### Corporate responsibility

Putting The Chevron Way values into action across environmental, social, and governance issues and priorities.

#### Dd

#### Downstream

The industry term for operations related to refining crude oil into finished petroleum products, and for marketing crude oil and the many products derived from petroleum.

#### Ee ESHIA

Chevron's Environmental, Social and Health Impact Assessment is a process designed to logically and consistently identify potentially significant projectrelated environmental, social and health impacts.

#### **Energy efficiency**

Efficient energy use is one of the easiest and most economical sources of new energy today.

#### Ff

#### Flaring and venting

The burning or release of natural gas that is often produced in association with crude oil, a process that typically occurs when there is no market or onsite use for the gas.

#### Gg

#### Geothermal energy

A renewable source of energy that uses the heat energy of the earth for heating or to create electricity.

#### Greenhouse gases (GHGs)

Gases that trap heat in the atmosphere; such gases include water vapor, ozone, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

### li

#### IPIECA

The global oil and gas industry association for environmental and social issues.

#### ISO 14001:2004

Environmental management system standard developed by the International Organization for Standardization.

#### Nn

### Nongovernmental organization (NGO)

An organization that is independent from government, generally a nonprofit organization devoted to providing assistance to or advancing a particular cause or issue.

#### Oo OGP

International Association of Oil & Gas Producers

#### OHSAS 18001:2007

An international Occupational Health and Safety Assessment Series management system specification.

#### Operational Excellence Management System (OEMS)

Chevron's standard approach to systematic management of safety, health, the environment, reliability and efficiency in order to achieve world-class performance.

### Pp

### Partner

In this report, partner is used in its broad sense to mean a person or organization associated with another in a common activity or one that shares a mutual interest. It does not imply a member of a contractual partnership in which the partners jointly own and carry on a business and proportionally share in liabilities, profits or losses of the business.

#### Rr

#### Renewable energy

Energy resources that are not depleted when consumed or converted into other forms of energy (for example, solar, geothermal, ocean and tide, wind, hydroelectric, and biofuels).

#### Ss

#### Social investment

The resources Chevron provides with the objective of benefiting our external stakeholders, and building and maintaining relationships to support our business.

#### Stakeholder

At Chevron, defined as those who affect, are affected by, or have a legitimate interest in our company's performance.

### Uu

#### Upstream

The industry term for operations related to exploring for, developing and producing crude oil and natural gas; for marketing natural gas; and for transporting crude oil, natural gas and petroleum products by pipeline and marine vessel.

### **Energy Efficiency**

LEDs (light-emitting diodes) are a key component of Caltex's efforts to achieve savings through energy efficiency and reduce the environmental impact of retail stations. LEDs in under-canopy lights, canopy fascia and signage are calculated to use 30 to 50 percent less energy. Numerous Caltex-branded stations have converted to LED lighting since 2010.



By operating responsibly, developing strong partnerships and investing in communities, together we make a brighter future. To learn more, please visit Chevron.com/CorporateResponsibility.

### **About This Report**

This report covers 2012 data and activities. We also occasionally mention activities that took place before 2012 and in early 2013 when they help provide a clearer picture of our performance. This report covers our owned or operated businesses and does not address the performance of our suppliers, contractors or partners unless otherwise noted. All financial information is presented in U.S. dollars unless otherwise noted. Our previous report was published in May 2012 and covers 2011 data and activities.

We continue to be informed by reporting frameworks and guidelines that include the Global Reporting Initiative (GRI) and the Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, 2nd edition, published in 2010 by IPIECA (the global oil and gas industry association for environmental and social issues) and the American Petroleum Institute (API). We included an index to help readers find information corresponding to the GRI and API/IPIECA indicators (see page 42).

This report, previous editions of our report and additional information can be found at Chevron.com/CR. We welcome your comments and feedback.

#### Ms. Lauren Buggs

Chevron Corporation 6101 Bollinger Canyon Road, Room 3200 San Ramon, CA 94583-2324

#### Cautionary Statement Relevant to Forward-Looking Information

This Corporate Responsibility Report by Chevron Corporation contains forward-looking statements relating to the manner in which Chevron intends to conduct certain of its activities, based on management's current plans and expectations. These statements are not promises or guarantees of future conduct or policy and are subject to a variety of uncertainties and other factors, many of which are beyond our control.

Therefore, the actual conduct of our activities, including the development, implementation or continuation of any program, policy or initiative discussed to forecast in this report, may differ materially in the future. The statements of intention in this report speak only as of the date of this report. Chevron undertakes no obligation to publicly update any statements in this report.

As used in this report, the term "Chevron" and such terms as "the company," "the corporation." "their," "our," "its," "we," and "us" may refer to one or more of Chevron's consolidated subsidiaries or affiliates or to all of them taken as a whole. All these terms are used for convenience only and are not intended as a precise description of any of the separate entities, each of which manages its own affairs.

### Peter Bartelme

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Chevron.com/CR2012

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