

CONOCOPHILLIPS

Spirit

Second Quarter 2016



Unlocking Australia's LNG Potential

See back cover for full photo

They say time flies when you're having fun.



spirit Magazine has been soaring for ten years!

From the desk of

Bill Bullock, President, ConocoPhillips Asia Pacific & Middle East

IN THIS ISSUE, *SPIRIT MAGAZINE* FOCUSES ON AUSTRALIA PACIFIC LNG'S (APLNG) EPIC JOURNEY to first cargo and shines a spotlight on the many exceptional people who contributed to one of ConocoPhillips' largest projects.

It isn't easy to adequately describe the thrill of seeing such a megaproject reaching completion. For many employees, it represents a career-high event against which future projects will be measured. After five years of construction, APLNG shipped its first cargo on Jan. 9, 2016, just a month after the December 2015 commencement of steady-state operations of Train 1 at the Curtis Island facility.

APLNG is a strategic asset within the company's global energy portfolio. Initial project discussions began more than 10 years ago when ConocoPhillips began investigating the potential of a coal seam gas to liquefied natural gas (LNG) project on Australia's east coast. The company became a foundation shareholder of APLNG in 2008. While the project was a major undertaking, it has contributed to the exponential growth of Australia's LNG industry. The nation has almost tripled its capacity in the past decade, and four of the seven LNG facilities sanctioned during this time utilize the company's proprietary Optimized Cascade® technology.

The dramatic decline in commodity prices over the past 18 months has had a significant impact on global energy markets. Oil and gas prices are cyclical, however, and while we would have preferred our initial cargos to be delivered during a time of higher prices, we have invested in this project for the long term and we are well positioned to benefit from the upcycle to come.

Other feature articles in this issue explore the search for Colombia's shale sweet spot; a look at what life is like for our colleagues in Jakarta, Indonesia; and a definitive examination of cost of supply, an important and timely topic given the recent impact of low commodity prices. ■

EDITOR'S NOTE: Turn to page four to see The Big Picture, featuring the winners of ConocoPhillips' first mobile photography contest. While we knew that smartphones and tablets had great photographic potential, we were overwhelmed by the sheer number and quality of images our colleagues from around the globe produced. The results bode well for future issues of *spirit Magazine*, where we'll put more of these images on display.



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After five years of construction, ConocoPhillips' Australia Pacific LNG



facility is poised to become a key strategic asset for the company.

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KIKY SHAHAB



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A cross-functional team enhances emergency response capabilities.

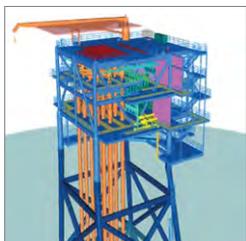
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44 Cost of supply

In the current environment of low commodity prices, business units throughout ConocoPhillips are working to stay competitive by reducing their cost of supply.

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By the end of 2016, ConocoPhillips plans to reach a milestone by testing the Picoplata 1 well in Colombia's Middle Magdalena River Valley.

GUS MORGAN

A *Ficus insipida* tree provides shade from the tropical sun in the Magdalena River Valley.

PHOTO BY PATRICK CURREY



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A compilation of news from around
the ConocoPhillips world

ON THE COVER In January 2016,
Australia Pacific LNG's first cargo was
loaded onto the *Methane Spirit*.
PHOTOGRAPHY BY WILLIAM DEBOIS

Winning entries: 2016 ConocoPhillips Mobile Photography Contest

From the spirit Magazine team:

When we decided to create a photo competition, we were eager to see what our colleagues would submit. We received so many excellent entries that it was difficult selecting our favorites. We based our decision on photographic quality, geographic diversity and connection to our business. Thanks to everyone who submitted photos, and we look forward to our next contest.





FIRST PLACE

LEFT:

Ary Nugroho, facility engineer,
Indonesia business unit

North Belut platforms at dusk during
South Belut project. From left: Well Head
Platform D, Central Processing Platform
and accommodation barge *Safe Astoria*

*Shot from a supply boat with an Apple iPod
Touch 5*

SECOND PLACE

ABOVE:

Bill Pepper, Central Mackenzie
Valley field lead and construction
superintendent

Winter access to ConocoPhillips' site near
Norman Wells in Canada's Northwest
Territories

Shot with an Apple iPhone 6

RIGHT:

Joe Engel, senior drilling engineer,
Alaska business unit

Doyon 19 rig move to CD3 drill site on a
seasonal ice road in Alpine, Alaska

Shot with an Apple iPhone 5s



THIRD PLACE

CLOCKWISE FROM TOP LEFT:

Mukti Ali, support service and pipeline planner, Indonesia business unit

Repainting the telecommunications tower in the Suban plant area

Shot with an Apple iPhone 6, edited with Snapseed

Matthew Bate, project lead, Eagle Ford business unit

Sunrise over pipeline construction at Lackey Unit B2 in the Eagle Ford

Shot with an Apple iPhone 6, panorama setting

Lee Easton, integration administrator, Information Technology, Bartlesville

"The Four Shadows" from the Denali-Norman 10 pad in the Bakken, North Dakota

Shot with an Apple iPhone 6

Kyle Salvato, systems specialist (onboard Belanak), Indonesia business unit

Awaiting the crane for personnel transfer from supply boat to vessel, FPSO Belanak, oil field Block B, South China Sea

Shot with an Apple iPhone 5, panorama setting







HONORABLE MENTION

THIS PAGE, CLOCKWISE FROM TOP:

Lee McAuliffe, senior geologist, Alaska business unit

Moraine 1 coring operation, North Slope, Alaska

Shot with an Apple iPhone 6, panorama setting

Chris Buchanan, planner/scheduler, Panhandle/Anadarko/Barnett (PAB)

All sunshine and rainbows in the Barnett:
Chad Walker, project lead, at Fairmain 1H lease

Shot with an Apple iPhone 4s

Chris Catonio, optimization technologist, Canada business unit

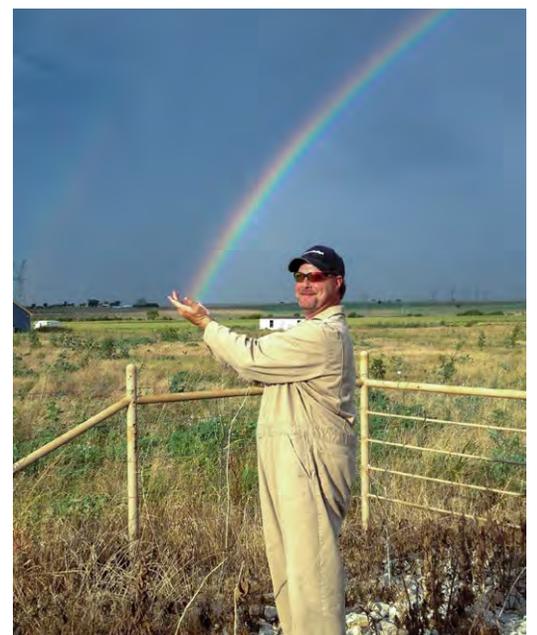
Pumping wells in the Carnwood (Clearwater North) field, Canada

Shot with an iPhone 5s

George Budiyanto, contractor, Indonesia business unit

Suban plant operations

Shot with an Apple iPhone 4





CLOCKWISE FROM ABOVE:

Chantel Rivard, A&OI specialist, Canada business unit

Old pump jack in the Wolf Lake Field

Shot with an Apple iPhone, edited with Aviary

Sing Gin Tan, facilities engineering lead, Malaysia business unit

Retrieving the free fall lifeboat after its first launch from the Keababangan platform, Sabah, Malaysia

Shot with an ASUS Zenphone 5

Sean Young, associate pipeline engineer, Gulf Coast business unit

The Houston main campus in the foreground and the new Energy Center complex in the background, shot from a Cessna 150

Shot with an Apple iPhone 5

The export jetty has a total of five arms: three load LNG onto the vessel; one returns boil-off gas into the liquefaction process; and one is a hybrid arm that can do both. APLNG is the only facility on Curtis Island with the installed hybrid arm.



Unlocking Australia's LNG potential

BY SUZANNE SCHULTE

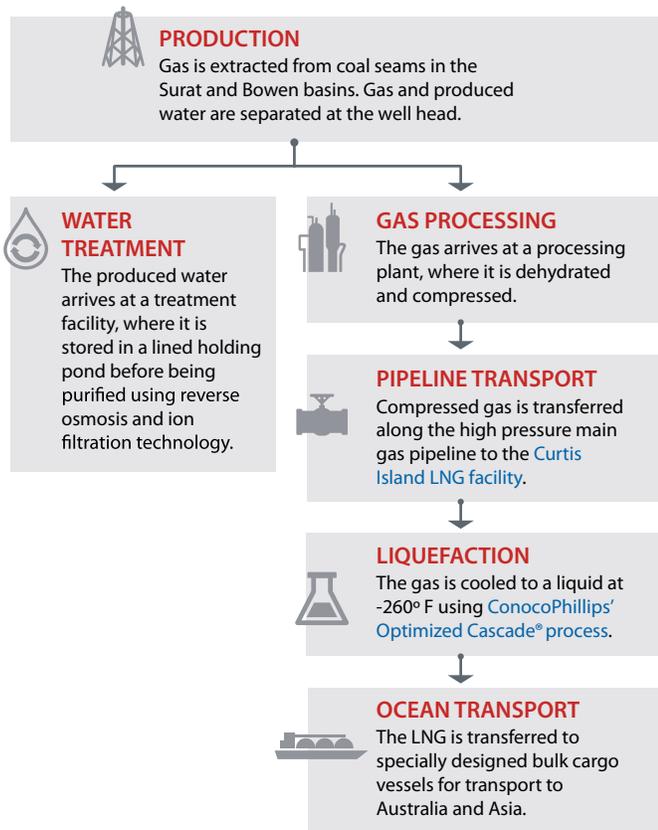
MORE THAN 10 YEARS SINCE ITS INCEPTION, AND AFTER MORE THAN FIVE YEARS OF CONSTRUCTION, THE AUSTRALIA PACIFIC LNG (APLNG) FACILITY ON CURTIS ISLAND IS POISED TO BECOME ONE OF CONOCOPHILLIPS' MOST STRATEGIC ASSETS.





All three Curtis Island LNG facilities are located in the state development precinct.

APLNG: from CSG to LNG



The facility's first cargo sailed in January 2016; by the end of the year, two trains are expected to be operational, exporting more than 120 cargoes annually.

APLNG is a coal seam gas (CSG) to liquefied natural gas (LNG) joint venture between Origin, ConocoPhillips and Sinopec. ConocoPhillips holds a 37.5 percent share and operates the Curtis Island facility. Origin also holds a 37.5 percent share and is responsible for operating the gas fields and main gas transmission pipeline. Sinopec joined the venture in April 2011 as both the foundation customer and holder of 25 percent in the joint venture.



The first APLNG cargo sailed aboard the vessel *Methane Spirit*.

BUILDING A WORLD-CLASS LNG FACILITY

Travel to the coastal town of Gladstone on the Australian east coast and you will find Curtis Island positioned in Queensland’s largest multi-commodity port, at the center of an emerging



industry. APLNG is one of three LNG facilities located on Curtis Island that have recently commenced exports.

Getting APLNG’s downstream project from concept to first cargo was a considerable undertaking that started with the project team working from Houston.

“We were able to capitalize on ConocoPhillips’ LNG knowledge base and long-term working relationship with Bechtel,” said Project Manager Kent Anderson. “Once the design and execution plans were established, the team expanded and diversified, drawing on ConocoPhillips’ global workforce. The collaborative relationship between ConocoPhillips and Bechtel led to a very successfully executed project.”

Teams were deployed to: Gladstone, Australia, for site development and facility construction; Batam, Indonesia, for construction of the Curtis Island modules; and Brisbane, Australia.



Kent Anderson, project manager

LEFT: Gas arriving at the Condabri central gas processing plant is dehydrated and compressed for transfer to the Curtis Island facility.

Developing upstream reserves

BY FIONA MCLEOD

Unlike the United States, minerals and resource property rights in Australia are held by the state and not by the landowner. Resource companies bid for development rights, and, in exchange for these rights, pay royalties to the government when the asset starts producing. Australia’s major CSG resources are found onshore in eastern Australia in the Surat and Bowen Basins.



Page Maxson

“APLNG’s resources are in geological locations demonstrating world-class reservoir properties, including high gas content, high permeability, shallow depth effective coal thickness and low CO₂ content,” said APLNG CEO Page Maxson. “APLNG is the largest producer of natural gas in eastern Australia, with sufficient reserves for 20 years of export and domestic contracts. Our domestic production supplies more than 40 percent of gas requirements to power stations, major industrial customers, homes and businesses in southeast Queensland.”

Joint venture upstream operator Origin develops

the gas fields, including drilling and the flow of gas from wellhead through to delivery to the LNG liquefaction trains.

When ConocoPhillips entered the APLNG joint venture in 2008, some existing infrastructure was in place owned and operated by Origin. To reach the level needed to support an LNG export business, additional infrastructure was required, including:

- More than 1,300 operated wells drilled and completed (plus additional wells each year).
- Installation of 2,200 km of gathering pipelines and a 530 km main transmission pipeline, including two lateral pipelines from the gas fields.
- Seven new gas processing facilities.
- Four water treatment facilities (two new) able to treat 110 ML/day.
- Twenty-four gas transmission pipelines and two pipeline compression facilities.
- Power infrastructure and distribution.
- Common infrastructure: accommodation camps, roads, bridges, airport upgrades, power and communications.



Warwick King, president, Australia East business unit (ABUE)

Greater involvement with **Bechtel** commenced in the design phase and often meant employing ConocoPhillips’ stringent global standards.

“We made the early decision to be more involved with Bechtel in order to influence key elements of the design and execution strategy, such as the use of the ground flare, the inlet air chilling system, and sub-contracting CBI to build the LNG storage tanks,” said Anderson.

ConocoPhillips also worked with Bechtel to identify a module fabrication yard.

“We knew Bechtel planned to use modular construction; we also knew we were their third project on Curtis Island,” said Anderson. “We used our global networks and relationships and worked with Bechtel to secure the Batam location.”

The close relationship with Bechtel continued throughout the project, encouraging a collaborative environment.

“Having three separate LNG facilities constructed simultaneously was unheard of, and it presented definite challenges such as highly competitive supply and labor markets,” Anderson said.



Coal seam gas well Drury 2



The Australia Pacific LNG facility will be operated by ConocoPhillips as part of the Australia Pacific LNG joint venture between Origin, Sinopec and ConocoPhillips



Ferries transport employees to and from Curtis Island.

“It also meant we were able to share best practices and key lessons as all projects progressed.”

Also unique to this project is that resource development is onshore, but the LNG facility is on an island. This meant that all material and people required for construction needed to be barged or ferried to the island.

“Since the start of the project, we’ve moved more than 3.5 million passengers on ferries between Curtis Island and the mainland,” said Anderson. “Through April 2016, the project has made approximately 40,000 cross-harbour trips moving materials and equipment.”

Train 1 of the LNG facility was handed over from the project to the business unit in May 2016, and Train 2 is expected to follow by the end of the year.

PEOPLE: BUILDING THE AUSTRALIA EAST BUSINESS UNIT

In 2011, ConocoPhillips made the decision to split the [Australia business unit](#) into two separate organizations. Australia East business unit (ABUE) was created to manage the ongoing construction of

Operations Excellence in project planning

Involving operations early in the project phase is a ConocoPhillips best practice, so Operations Excellence was integrated into the initial APLNG project team.

“Involving the Operations Excellence group from the beginning enabled us to address lessons learned from other LNG facility construction projects and ensure operations assurance deliverables were practically reflected in the facility design and construction contract,” said Downstream Operations Manager Charlie McWattie. “As a result, there were no late operationally driven changes to facility design once the engineering, procurement and construction contract was finalized. In our final readiness review, we had no significant findings, reinforcing the importance of operations excellence.”

This operational perspective benefited the project in many other ways, including the “build clean” initiative that ensured piping and equipment were cleaned and preserved in the module yard before being shipped.

“Build clean successfully reduced remnant construction debris in the plant and enabled the facility to effectively start up and quickly achieve design production rates,” said McWattie. “Now we’re focused on identifying further opportunities to get Train 1 to a higher level of reliability and increased efficiency.”



Charlie McWattie



Michael English, operations technician



Human Resources
Director Paula Saftig

APLNG and, once complete, operations. Starting as a small shareholder office, ABUE rapidly grew to support the anticipated needs of an operational business unit.

“My initial directive was to support the project in taking the final investment decision on our production trains and to establish an operating business unit,” said ABUE President Warwick King.

Utilizing shared services arrangements with the Australia West business unit and working with business units from across the globe, ABUE was able to leverage long-term ConocoPhillips knowledge and practices. This involved securing appropriate office accommodation, building

management systems and recruiting, onboarding and integrating a new workforce.

At the time, ABUE was operating in a highly competitive business environment.

“In the Australian market, six new LNG facilities were scheduled to come on stream within an 18-month period,” said King. “ABUE leveraged ConocoPhillips’ global experience as an LNG facility operator and its well-known SPIRIT Values to recruit.”

Primary focus was given to establishing the ConocoPhillips culture and ensuring individuals new to the organization embraced the company’s SPIRIT Values.



The first cohort of operations technicians completed their initial training in 2013.

Training a highly skilled workforce

BY PAULA SAFTIG AND AUDRA MULCAHY

Although Australia is known for its highly skilled workforce, ABUE recognized early that demand would quickly outstrip the supply of experienced LNG operators. To meet growing business needs, the team set about developing a highly specialized training program to complement its recruitment strategy.

It was critical to bring the workforce to the level of competency required to safely and efficiently manage the

facility’s commissioning, startup and operation. Extensive work was undertaken to define training needs, design training initiatives, establish contracts and implement training for a workforce with little or no LNG industry experience.

In 2013, the ConocoPhillips Operations Technician Foundations training program was launched. This unique partnership between ConocoPhillips, Central Queensland Institute of Technical and Further Education, Southern Alberta Institute of Technology, and PetroSkills provided training for employees new to the LNG industry. The five-month program combined

instructor-led, classroom-based learning and hands-on training. Between 2013 and 2015, 86 technicians graduated from the program.

Since the program’s completion, ConocoPhillips has worked with the other Curtis Island-based LNG proponents and the Energy Apprenticeships Group to introduce a tailor-made program for local workers with no prior LNG experience. The program allows participants to gain the necessary qualifications for LNG process operator positions. In February 2016, the first 18 trainees (six sponsored by ConocoPhillips) commenced the program.



Modules for APLNG were constructed in Batam, Indonesia and shipped to Gladstone.

The Batam module yard at a glance

BY AUDRA MULCAHY

The Batam module fabrication yard in Indonesia, managed by Bechtel, produced 69 pre-fabricated steel structures to house production units for the LNG facility. Each unit was shipped to Australia by barge, with a four-week transit time, and took between 24 and 48 hours per module to unload.

“At peak construction, approximately 5,000 people worked at the yard, completing 14 million labor-hours without a lost time injury — an incredible achievement,” said APLNG Project Manager Kent Anderson. “Only nine recordable injuries occurred in the two and a half years we were constructing in the module yard.”

HEAVIEST AND WIDEST MODULE:
Train 2 cryogenic rack, module 202DA at **3,412 tonnes**

LONGEST MODULE:
Propane condensers at **77 m**
(17 car lengths)

TALLEST MODULE:
30.5 m
(10 stories high)



Some of the modules for Australia Pacific LNG are escorted through Gladstone Harbour.



HSE General Manager
Jack Taylor

“Through structured planning, due diligence and regular collaboration with both internal and external stakeholders, the business unit successfully recruited its operations workforce two months ahead of target,” said ABUE Human Resources Director Paula Saftig.

EMBEDDING A FOUNDATION HSE CULTURE

A key focus in establishing ABUE has been aligning a new workforce with ConocoPhillips’ strong, value-driven commitment to health, safety and environment (HSE).

“We wanted to proactively shape our HSE culture, knowing that we had a diverse workforce with a range of experience,” said HSE General Manager Jack Taylor. “A team set about designing



The HSE culture framework was implemented through interactive workshops.

The journey to zero injury safety

BY STEVEN FINDLAY

With more than 4,000 employees, contractors and subcontractors engaged in construction, commissioning and startup activities at APLNG,

establishing a zero injury safety culture was challenging. As construction peaked during 2014, injuries increased, reaching seven to eight recordable injuries every few months, with the

cycle unchanging as the project entered 2015. These statistics highlighted the need for a step change in the organization’s approach and signaled the beginning of a journey that is transforming APLNG’s safety culture.

Cooperation between ConocoPhillips and Bechtel was crucial to achieving success. Together they adopted a one site, one team approach. Campaign initiatives focused on workforce engagement, giving workers an active role in creating solutions to safety issues. The approach has been successful, with a greater than 60 percent reduction in total recordable injuries between February 2015 and December 2015.

“In 2016, we achieved a 120-day period without a recordable injury,” said Site Manager Danny O’Dell. “As we reach construction and commissioning deadlines while operational activity continues, our priority of zero injuries will remain. Last year’s achievements demonstrate that Target Zero is achievable.”



Each of the two storage tanks at APLNG can store up to 160,000 cubic meters of chilled LNG.

and integrating a framework detailing expected HSE behaviors that complement ConocoPhillips' SPIRIT Values, Life Saving Rules and leadership competencies," Taylor said.

The HSE culture framework development and implementation was driven by strong leadership from ABUE President Warwick King and Operations Manager Charlie McWattie, along with extensive workforce collaboration.

"The culture framework defines positive behaviors that support a strong culture and negative behaviors that should be avoided. Making a real difference takes time and requires



A key component of the HSE Culture Framework is visible safety leadership.

sustained and determined effort by everyone," McWattie said.

Unique to ABUE, the HSE culture framework applies to all levels of the organization.

"It is an innovative approach to a perennial challenge in our industry, and I believe it is a vital part of the foundation we have established to sustain a safe and reliable legacy asset for ConocoPhillips," King said.

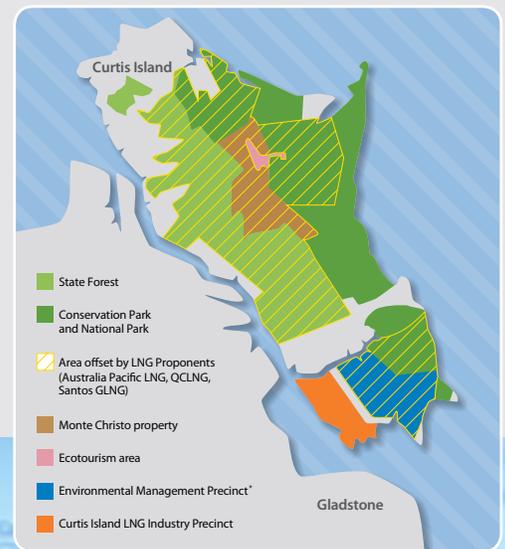
OPERATING IN A SENSITIVE ENVIRONMENT

APLNG's downstream facility is situated within the Great Barrier Reef UNESCO World Heritage area. As part of the environmental approval process, project planners investigated the feasibility

Collaborative environmental offsets

In Australia, federal and state environmental approvals to develop any major construction project require biodiversity offsets to counterbalance unavoidable disturbance. These offsets can involve preserving and protecting world heritage values, marine habitat, endangered and of-concern regional ecosystems and threatened fauna habitat.

On Curtis Island, the LNG industry's landmark conservation initiatives put nearly two-thirds of the island under a conservation management strategy. Combined with the existing national park, more than 59 percent of the island is actively managed under a conservation management plan, compared to just 2 percent used by LNG projects on the southern tip. This will protect the island's unique ecology and heritage for future generations and contributes to conservation of more than 25,000 hectares in perpetuity. The multi-million-dollar deal involved APLNG and other LNG proponents on Curtis Island working together to purchase a former grazing property and associated leases. These titles have been transferred to the state government, bringing cattle grazing to an end and allowing recovery of fragile marine plain ecosystems and long-term restoration of environmental values.



of utilizing common use infrastructure for water and wastewater services to minimize environmental risks and marine traffic on Gladstone Harbour.

Traditionally, desalination and treatment plants would have been built as part of construction

More than 23 kilometers of drainage systems divert the flow of natural water around the APLNG site. Water that falls on site is held in one of six sediment basins for treatment before being released to natural systems.



to meet the facility’s freshwater and wastewater treatment needs. Instead, ConocoPhillips opted to fund the construction of pipelines connecting infrastructure on Curtis Island with mainland water and sewage utilities. This effort significantly reduced harbor traffic associated with water supply and eliminated the potential release of some five million barrels per year of brine and treated effluent to Gladstone Harbour from APLNG. The company reduced carbon emissions and minimized its operational footprint by eliminating the need for a desalination plant and wastewater treatment facility. The pipeline solution saves millions across the facility’s life cycle and reduces capital expenditures by an estimated \$72 million Australian dollars. It is now being used by other operators on Curtis Island.

“The pipeline was a win for industry and for the community,” said Anderson. “Gladstone Harbor is a popular recreation area for local residents, so a solution that helps preserve its natural state is good for all of us.”

Science-based education

The *APLNG Port Curtis HarbourWatch* partnership program was established in 2012 in collaboration with the local marine advisory committee and the Boyne Island Environmental Education Centre to deliver applied marine science education to local students. Since its inception, the *HarbourWatch* program has expanded from secondary school multi-stream science classes to additional senior curriculum science classes, local primary schools and field trips for outer regional schools and community groups.

RIGHT: Some of the students involved in the *HarbourWatch* program





TECHNOLOGY AND INNOVATION: Ground flare system

APLNG is the only facility on Curtis Island to install a ground flare, a critical piece of safety equipment. Shielded by an 18-meter high enclosure, the three flare fields employ leading technology and design for emissions management to minimize visible smoke, reduce visual impact and light disturbance to local communities and minimize the potential for light to affect marine mammal and turtle nesting and breeding behaviors.

“During the design stage, a significant effort also was made to integrate equipment and processes that make efficient use of gas volumes, reducing the need to flare,” said Kent Anderson. “To date, we’ve had no visible flaring events, a significant achievement during commissioning that has differentiated the facility within the Gladstone community.”

APLNG ground flare system



The longest pipe pull in Australia

BY ROBERT GIBB

Construction of the last stage of the gas pipeline between the Surat and Bowen Basins and the APLNG facility presented a number of unique engineering and environmental challenges. APLNG and [Queensland Curtis LNG \(QCLNG\)](#) both chose a pipeline route that would cross Gladstone Harbor at a location to the north called the Narrows.

In a joint project managed by QCLNG, the two organizations bundled their two pipelines into a single crossing that would be the longest pipe pull undertaken in Australia.

To cross the marshland and the Narrows, individual concrete-coated pipe lengths were welded together to form strings approximately 4 km (2.5 miles) long. These strings were then winched through a flooded marshland cofferdam while attached to floats. As the pipe string was moved above the start of the dredged trench across the Narrows, the floats were removed and the pipe was pulled along the bottom of the trench to Curtis Island.

The pipe pull was also one of the most complex and innovative stages of the pipeline construction process. Temporary infrastructure, including road and rail tracks, bridges across two creeks, cofferdam, jetty and a 450-tonne winch pad, was required to safely complete the project. Government regulations required the Narrows crossing to comply with more than 600 stringent environmental conditions in the project's 21 environmental management plans and 20 permits.



SOURCING LOCALLY TO REDUCE RISK

In 2015, ABUE finalized negotiations with refrigerant suppliers BOC and Qenos to ensure a reliable domestic supply of ethylene. Working with the vendor to develop and install a unique ISO container refilling terminal, APLNG now receives 60 percent of the ethylene used in the liquefaction process from within Australia. The remaining 40 percent is purchased from suppliers in Southeast Asia.

“Supply from outside the country has a 12-week lead time, so the capability to source ethylene in Australia assists ongoing plant reliability,” said Australia East Supply Chain

Manager Nage Moummar. “During the startup of the LNG facility, an additional 10 ISO containers were required to meet commissioning requirements. They were sourced locally with no impact to production.”

**COMMUNITY AND STAKEHOLDER:
A COLLABORATIVE CONTEXT**

In 2010, APLNG and two other projects on Curtis Island received initial project approvals to proceed within four months of one another, starting the largest industry construction period that Gladstone had ever experienced. At the time, Gladstone was a small city with a population of just over 30,000



Nage Moummar,
Supply Chain Manager,
Australia East

Partnering with NANA to realize indigenous content

BY DOM DOWLING

ConocoPhillips has partnered with [NANA Australia](#) to develop and implement ABUE’s indigenous content and engagement strategy with the ultimate goal of realizing a wide range of social and economic benefits for traditional owners in Gladstone.



Martin Breen

“This work has set ConocoPhillips apart in the region and strengthened our relationships with the local indigenous community,” said

Government & External Affairs General Manager Martin Breen.

Establishing a foundation legacy for the local indigenous community involved taking a holistic, long-term view to embedding indigenous content within ABUE.

“Our strategy includes engaging our Supply Chain team and suppliers,



Marion’s Cleaning Service is a 100 percent indigenous owned and operated business that provides cleaning services for APLNG. They employ 14 Gladstone residents, the majority of whom are indigenous.

supporting the growth of local indigenous businesses, and enhancing our cultural awareness as an organization,” said Breen. “Leveraging Supply Chain to increase indigenous content will deliver sustainable opportunities for traditional owners.”

While strategy implementation

is still in its early stages, progress to date includes creating 20 new jobs for indigenous workers, 10 new indigenous trainee roles, 14 new contracts to indigenous businesses, and a 100 percent indigenous business employing 14 local staff that services ConocoPhillips and other local suppliers.



Robert Gibb, manager,
Communities &
Sustainable Development

people. Despite its industrial maturity, significant social impacts were anticipated as part of the burgeoning LNG industry development, highlighting the need for collaboration to ensure the best outcomes for local communities.

One way this was achieved was through the Regional Community Consultative Committee (RCCC). Established to provide two-way information sharing between the Gladstone community and LNG companies, RCCC membership included 12 community representatives, including

two from each of the three LNG companies, as well as an independent chair.

“The RCCC allows community members to identify key community concerns and work with the LNG companies to find and deliver solutions,” said Robert Gibb, manager, Communities and Sustainable Development.

One impact on Gladstone during the early project execution phase was an acute housing shortage brought about by a rapid population influx. Early consultation and planning

Australia Pacific LNG trade and deliver

BY FIONA MCLEOD

As APLNG prepared for its first LNG cargo, gas field production was ramping up to meet export delivery levels, presenting daily opportunities to trade excess gas on Eastern Australia’s emerging short-term gas trading market.

To take advantage of these opportunities and to manage the longer-term requirement for matching production with export and domestic customer requirements, APLNG established a new Delivery & Trading team. The team is part of the Shareholder & Commercial group managed by Origin.

Led by Delivery & Trading Manager Mark Zdenek, a ConocoPhillips secondee, the team is responsible for executing a variety of sales and delivery contracts secured by the Commercial Operations group, initiating short-term customer transactions, as well as participating in the Wallumbilla Hub Gas Trading Market.

“Our mission is to find the best commercial outcome for our gas position each day. We take into account a wide range of factors, including the operational needs of the enterprise, pipeline capacity and constraints, supply and demand variations, market price and other factors that affect energy demand, such as weather and electrical generation,” Zdenek said.



Some members of the Australia Pacific LNG Trading & Delivery team, left to right: Mark Zdenek, Todd Minuzzo, Adam Offermann, Erin Sim, Mikolay Podgorski, Paul Forrester, Christine Girgis, Julie McGee and Nestor Paraska

The 15-member team executes contracted longer-term sales and short-term gas agreements with commercial and industrial customers, electricity generators, aggregators and retailers, as well as other Queensland LNG exporters. With the rapid increase in gas field production capability ahead of APLNG’s first cargo, the team exploited short-term opportunities to find commercially effective solutions for daily gas volumes that exceed domestic

contracts. In the lead-up to first cargo, APLNG exceeded production rates of around 1,000 million of standard cubic feet per day (MMscfd). Of this, approximately 400 MMscfd was earmarked for APLNG’s direct domestic customers, the largest domestic portfolio in Queensland, and the remaining volume managed through arranged products such as physical puts or swaps, short-term transactions or via the Wallumbilla Hub Gas Trading Market.



Gladstone Regional Community Consultative Committee (RCCC)

informed the decision to front load investment in the Integrated Housing and Accommodation Strategy to address both workforce accommodation and Gladstone’s affordable housing needs. It accounted for nearly half of the project’s downstream expenditure on social impact mitigation.

LOOKING AHEAD

ABUE Operations expects Train 2 handover by the end of 2016, and 2017 is set to be a monumental year for the business unit, its first full calendar year of steady-state operations from two liquefaction trains.

“Once it is complete, more than 55 million labor-hours will have been worked to construct the Curtis Island facility,” said King. “With an operational expectancy of more than 30 years and in close proximity to Asian energy markets, APLNG will be a legacy asset for ConocoPhillips’ global energy portfolio. I look forward to sustained safe and reliable operations and best in class performance. It has been a phenomenal effort from

all involved and I would like to thank everyone for getting the facility to where it is today.” ■



Project partners at the opening of the Fisher Crest Gladstone Affordable Housing development (from left) Mayor Gail Sellers, Gladstone Regional Council; John McAuliffe, chair, Gladstone Affordable Housing; John Phalen, GLNG Santos; Robyn Sotiris, QGC; Robert Gibb, APLNG; Rebecca Oelkers, manager, Gladstone Affordable Housing



Living and working in Jakarta, a city of choices



ABOVE: Business Development Manager Dini Sunardi

RIGHT: Ade Cornelia, HR business partner, stands in front of the Jakarta History Museum. Located in the Old Town (known as Kota Tua) of Jakarta, it was built in 1710 as the city hall. [Jakarta History Museum](#) opened in 1974 and displays objects from the area's prehistoric period.

BY KIKY SHAHAB, PHOTOGRAPHY BY GHIFARI N. SEPTIYANTO

MOST JAKARTA'S ARE EARLY RISERS, WAKING UP AS EARLY AS 4 A.M. EVERY WEEKDAY. FOR CONOCOPHILLIPS INDONESIA EMPLOYEES, WHOSE OFFICE HOURS BEGIN AT 7 A.M., JAKARTA'S CHAOTIC AND NOTORIOUS TRAFFIC IS AN INTEGRAL PART OF DAILY LIFE.

"Traffic is undeniably a top disadvantage to working in [Jakarta](#)," said Dini Sunardi, manager, Business Development. "To get to places that normally take 30 minutes could easily be two hours due to bumper-to-bumper traffic. To get around, you must work around peak traffic hours, which are unfortunately unpredictable."

Traffic aside, Jakarta is an interesting city. There's never a dull moment.

"Jakarta is unique and unpredictable," said Adra Hendrawan, team lead, Government Relations.

"You have to be prepared before stepping out from home. Whether it's the weather, the traffic or the political dynamics, the ever-changing atmosphere impacts people's routines. You can pretty much get

anything you need in Jakarta, depending on what you are looking for."

"Jakarta is a vibrant city with lots to offer in terms of outdoor and indoor activities throughout the year," said Marti K. Srinagesh, chief, Completion Engineering. "I enjoy hiking the mountains



and snorkeling in the clear waters around the country with my family over weekends and holidays. I love being able to travel to the many different islands of Indonesia and experience the



The Gelora Bung Karno Stadium, located in Senayan, Central Jakarta, is named after Sukarno, Indonesia's first president and founding father. The multipurpose stadium has a seating capacity of over 88,000 and is used primarily for football matches.

differences in scenic wonder, local culture and cuisine from across the country.”

Home to more than 10 million people, the city boasts some of the best nightlife in Asia. “Jakarta offers a lot to its residents in terms of recreation, so people who work here can easily find activities that fit their preference when they need a break from work, whether it’s a place to eat, shop or hang out with friends,” said Radhes Johan, SCM business analyst. “Many people also acknowledge that one of the best things in Jakarta is its shopping centers. There are approximately 173 malls in the city to choose from!”

DIVERSITY IN ALL ASPECTS

ConocoPhillips Indonesia is now the nation’s biggest pipelined gas producer. The company’s participation in domestic long-term pipeline gas contracts is helping to bring gas from South Sumatran fields into key areas such as central Sumatra, West Java and the Batam Islands to meet increasing domestic and industrial demands, while its international gas contracts with Singapore and Malaysia are contributing significantly to national export revenue.

ConocoPhillips Indonesia currently operates

four production-sharing contracts (PSC) under the supervision and control of the Special Task Force for Upstream Oil and Gas Business Activities (SKK Migas) as representative of the government of Indonesia. Its operation areas include one offshore block, the South Natuna Sea Block B PSC, and three onshore blocks, the Corridor Block PSC and the South Jambi B Block PSC, both in South Sumatra, and Kualakurun PSC in Central Kalimantan.

Located on the northwest coast of Java, the world’s most populous island, Jakarta is the country’s economic, cultural and political center. ConocoPhillips Indonesia employees in the Jakarta office are responsible for external stakeholder engagement activities.

“We are close to the decision makers, whether it’s the regulatory body or the ministry, and also our peers in oil and gas industry. This works in our favor most of the time,” Sunardi said.

Fikri Hernawan, instrument engineer, said, “Since Jakarta is the capital city, I am able to network with people from all over Indonesia, not just in the oil and gas industry but also with people from the petrochemical industry, government and vendors.”

Since 1950, Jakarta has attracted people from all parts of Java and other Indonesian islands. The



Chief Completions Engineer
Marti K. Srinagesh



SCM Business Analyst
Radhes Johan

BELOW: Adra Hendrawan, team lead, Government Relations Central & NV, stands in front of the Indonesian State Palace (Istana Negara), part of the presidential palace compound.





Senior Reservoir Engineer
Sylvia Yusim

flood of migrants came for economic reasons, as Jakarta offered the hope of employment.

“I find that the most interesting thing about Jakarta is its people! Jakarta is a big, lively city filled with a variety of human characters, each with a different life purpose,” said Ade Cornelia, HR business partner. “The city is very heterogeneous, and living here, we have to adjust to its pace. Everyone is always in a ‘state of trying.’ Either it’s trying to get home faster, trying to live healthily despite a busy schedule, or trying to squeeze in some worthy social time hanging out with close friends.”

Jakarta is pluralistic and religiously diverse. The majority ethnic groups include Javanese, Betawi and Sundanese. The majority of the population are Muslims, with significant religious minorities, notably Christian and Buddhist.

“What I consider to be the most advantageous thing about working in Jakarta is being able to meet and interact with people from various backgrounds. It gives you an opportunity to learn about different cultures,” Radhes Johan said.

SUPPORTING WORK-LIFE BALANCE

ConocoPhillips Indonesia’s offices in Jakarta, Ratu Prabu 2 and the Cilandak receiving facility are located at TB Simatupang road, South Jakarta. It is not in the vicinity of Jakarta’s central business district, but closer to residential areas in the suburban parts of the city — which employees appreciate.

“I like our office location because it is in a less

polluted area, compared to the central parts of Jakarta,” said Nina Herlyna, formalities analyst.

Sunardi added, “The fact that our office is not in the central business district, but more in the energy corridor south of Jakarta, I think is the best thing. It doesn’t take us too long to commute. This definitely helps us have a better work-life balance.”

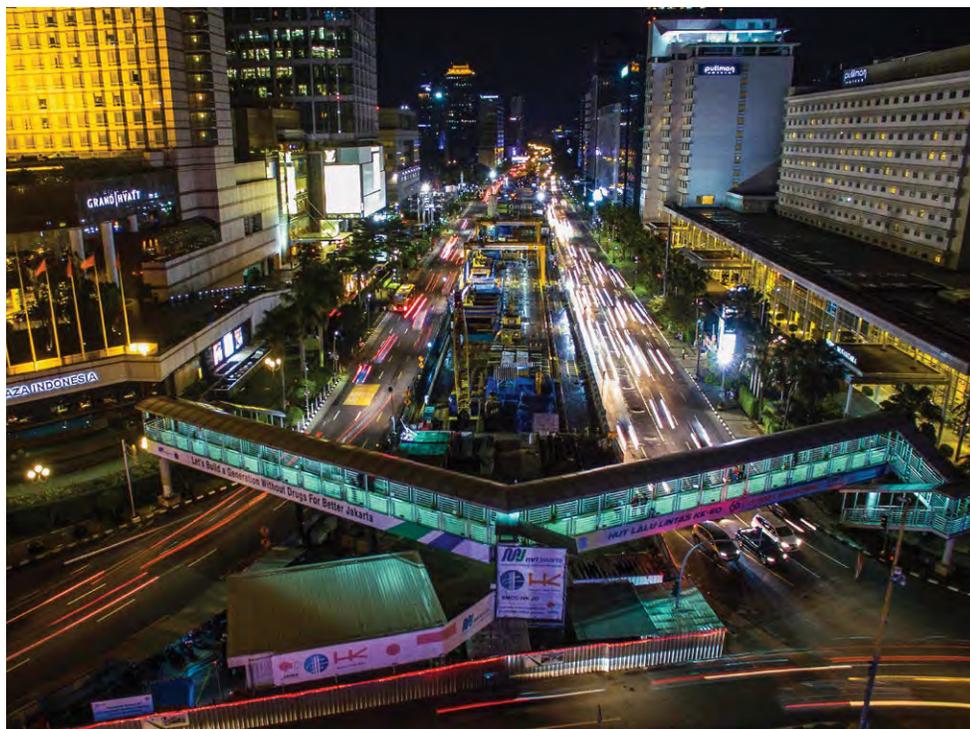
The Jakarta employees also appreciate the shuttle bus services provided by the company. Currently, there are 37 shuttles operating every day to and from Ratu Prabu 2. The routes cover approximately 23 residential areas in Jakarta and its outskirts.

There are also many activities that support work-life balance. The office has a gym facility

CENTER PHOTOS, CLOCKWISE FROM TOP: Nina Herlyna, formalities analyst, unwinds at her favorite after office hangout.

A lunch chat session at the company’s Ratu Prabu 2 office promotes “Energy in Action” programs.

Construction began on the [Jakarta Mass Rapid Transit](#) on October 10, 2013, with Phase 1 of the project (Lebak Bulus to Hotel Indonesia Roundabout) to be opened to the public by August 2017.



and sports clubs that conduct regular training after office hours.

“We’re really encouraged to have work–life balance! And it’s not just a slogan or motto. Employees really feel it and respond to the encouragement,” said Hernawan.

Senior Reservoir Engineer Sylvia Yusim said, “What I like the most about my working environment is the full support from the company in work-life balance programs. In the low oil price environment, I appreciate the positive programs like *Energy in Action!*, Career Week and Lunch Chat events. So, in addition to developing through working experiences, I still can develop my life in the company.”

DINING IN JAKARTA

Jakarta has so many amazing restaurants that it’s entirely possible to never repeat a meal.

“Being the food enthusiast that I am, I love the variety of food options in Jakarta. There are many culinary options available, from fine dining to street food. From traditional Indonesian to Western, Asian, Indian, Middle Eastern and African food, we have it all,” said Sunardi. Her favorite restaurant, located in a shopping mall near the office, is *Bebek Tepi Sawah*, which serves Balinese crispy duck with three kinds of chili on the side.

Srinagesh added, “Restaurants that cater to multiple local and international cuisines abound in Jakarta, and new ones are popping up all the



On April 21, Indonesians celebrate *Kartini Day* to honor R.A. Kartini, a local heroine. An employee volunteer event raised funds to provide ultrasound machines for remote areas near ConocoPhillips Indonesia’s operations in Kepulauan Riau Province.

time. What I love here is that many restaurants are not chains; every place makes similar dishes but slightly different and equally delicious.”

Near the company’s Ratu Prabu 2 office, an area that is great for restaurant hopping is *Kemang*.

“Kemang is my favorite culinary spot in Jakarta. One of my favorites, *Lumpang Emas*, serves authentic Indonesian food and side dishes. It might look like a simple menu, but the fusion of these simple dishes tastes amazing,” said Yusim.

Jakarta is also well-known for its cozy hangout spots.

“My favorite after-work spot is *Soupanova EcoSky*, located in Simatupang area. It’s a rooftop garden restaurant with a view of Jakarta’s skyline. The place is so nice, and the food and drinks are affordable!” said Herlyna.

Hendrawan’s favorite spot is *FJ Bistro*, located in the Kemang area. “The place has great coffee, great food and a nice ambience.”

It may be an understatement to say Jakarta is a dynamic city. Currently under the leadership of an action-oriented, outspoken leader, it is in the midst of a very public metamorphosis. Despite its maddening traffic, Jakarta is driven by an optimism that is palpable. The city never fails to surprise.

Life in Jakarta is not for the faint-hearted, but there are many areas to explore, restaurants to enjoy and new friends to be made. It’s up to the individual how they decide to live their life here, but whatever one chooses to make of Jakarta, nobody can say that life is dull. ■



An authentic Balinese rice dish, *nasi campur*, from one of Jakarta’s diverse Indonesian restaurants



Visualizing Success:

Broadening response capabilities while driving down cost and saving time

BY COURTNEY TIMM

AN EFFECTIVE EMERGENCY RESPONSE TO A LOSS OF SUBSEA WELL CONTROL CAN REQUIRE SIGNIFICANT RESOURCES, INCLUDING EQUIPMENT, PERSONNEL AND FUNDS. THE DEPTH AND BREADTH

of this type of response would be significant, crossing many organizational and functional boundaries. This cross-functional collaboration was recently demonstrated by a team from Global Wells & Marine, Gulf of Mexico Deepwater Drilling, Gulf of Mexico Exploration and Information Technology's Geospatial Analysis group.

One of the functions in a subsea source control response is the Simultaneous Operations (SIMOPS) group that prioritizes and coordinates the location and movement of all aerial, on-water and subsea vessels within a two nautical mile, 3-D radius of the effected well. This operation typically involves simultaneous real-time management of aircraft, helicopters, drilling rigs, oil tankers, dispersant and support vessels, remotely operated vehicles (ROV), and autonomous underwater vehicles (AUV) — all operating within a highly congested area.

Historically, this function was managed using paper charts, spreadsheets and aerial photography. Since the Macondo incident, management of this response function moved into the electronic age. Recently, Kris Kallaway, Global Wells Functional Support Plan SIMOPS team lead, transitioned the operation into an AutoCAD format so that real-time graphical representations could be developed to update and manipulate vessel movements, subsea obstacles, ROVs and more.

“The AutoCAD process was a significant improvement over the paper process, but it still had a weakness in that it relied on an external contractor to run and support it. We had a single point of failure if the contractor was not available to

“As an incident management team member, I immediately saw the value in integrating non-spatial SIMOPS work with our pre-well seafloor evaluation into the spatial environment of ArcGIS.” — BRUCE SAMUEL

support our exercise or response,” Kallaway said.

In June 2015, the team engaged the Gulf of Mexico Exploration group to integrate upcoming well and relief well data into SIMOPS maps. Bruce Samuel, senior geophysicist and shallow hazards expert for Gulf of Mexico Exploration, recognized the potential to eliminate reliance on an external contractor by using existing software solutions.



FROM LEFT: Marine Assurance Integration Director Kris Kallaway, Geospatial Analyst Wilmer Menjivar and Senior Geophysicist Bruce Samuel leveraged internal capabilities to improve visualization of simultaneous operations during a potential subsea well control event.

ArcGIS is a computer system used to construct, record, analyze, manipulate and integrate geographic data with non-spatial descriptive information. That information then enables users to visualize, question and interpret data to understand relationships, patterns and trends.

“As an incident management team member, I immediately saw the value in integrating non-spatial SIMOPS work with our pre-well seafloor evaluation into the spatial environment of ArcGIS,” said Samuel. ArcGIS is a computer system used to construct, record, analyze, manipulate and integrate geographic data with non-spatial descriptive information. That information then enables users to visualize, question and interpret data to understand relationships, patterns and trends.

Geospatial Analyst Wilmer Menjivar worked with the team to develop ArcGIS maps specific to Gulf of Mexico exploration wells. These maps were created in preparation for immediate use in the event of an incident or regulatory exercise.

The flexibility of ArcGIS, combined with the preparatory work, allows for dynamic near real-time status updates to the incident management team as the situation evolves. In the event of an incident, this product can be fed with live updates of vessel, aircraft, ROV and AUV positions to provide real-time representation of the response.

“This is technical pioneering — a step change improvement to existing preplanning techniques within the industry,” Menjivar said. “The technology delivers the capacity to find business solutions by leveraging new and different applications, especially where we can focus on generating time and cost savings while improving real-time emergency response plans.”



Joey Armstrong,
manager, Gulf of Mexico
Deepwater Drilling



Dean Davis, MWCC project
integration manager

ABOVE RIGHT: The improved SIMOPS visualizations allowed the incident management team to make timely decisions during the Bureau of Safety and Environmental Enforcement (BSEE) exercise on Sept. 2, 2015.



On Sept. 2, 2015, this collaborative effort was put to the test when the Bureau of Safety and Environmental Enforcement (BSEE) called an unannounced exercise focused on a drilling exploration response scenario in the Gulf of Mexico. BSEE notified ConocoPhillips of the exercise at 7:30 a.m., and by 9 a.m., the Gulf Coast business unit, in collaboration with the Crisis Management & Emergency Response group, Global Incident Management Assist Team and the U.S. Gulf of Mexico Exploration and Drilling groups, had a fully staffed and functioning incident management team operating out of the Westlake 3 Emergency Operations Center. The team that was mobilized to support this exercise included the Source Control Branch, where Kallaway led the SIMOPS group.

The scenario that BSEE chose for the exercise involved the Harrier prospect, a well that ConocoPhillips had already completed drilling. The team quickly integrated maps, well information and SIMOPS data to produce an initial SIMOPS plan within a two-hour time frame. The maps were developed to be used by multi-disciplinary groups for assessing real-time activities and enabling a coordinated and integrated response. This plan is adaptable to any operating field worldwide.

“Having subsea exploration wells mapped out in advance of an exercise or event can save many

hours where time is critical and expectations are high,” said Kallaway. These SIMOPS response plans can be completed for any well globally within a couple of days, once requested by the business unit. If these plans are developed in advance of an exercise or response, the SIMOPS team can access them and be fully functional within a few hours.

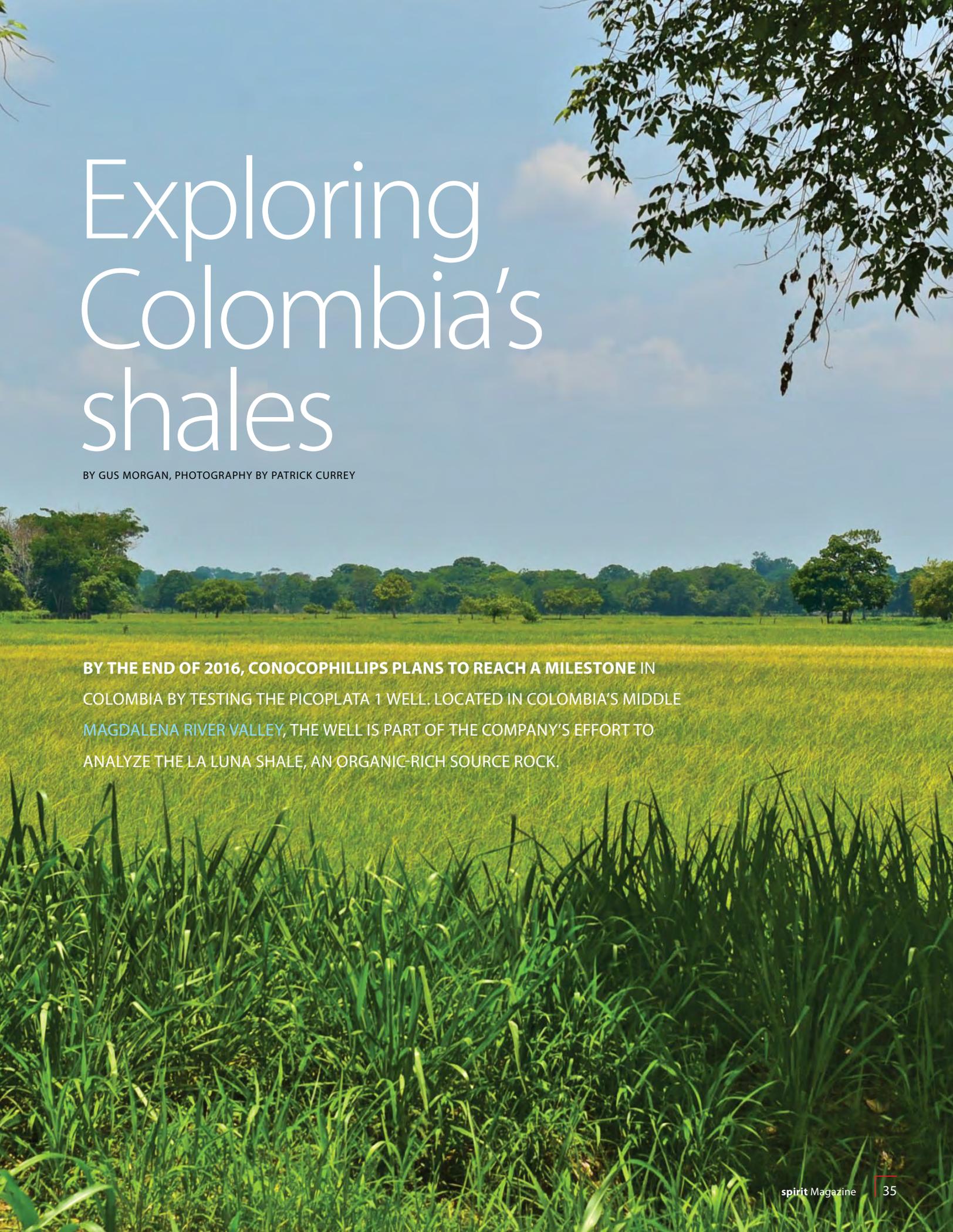
“Having subsea exploration wells mapped out in advance of an exercise or event can save many hours where time is critical and expectations are high.” — KRIS KALLAWAY

BSEE regulators took a particular interest in the visual representations of the response and requested hard copies of the digital products produced in the ArcGIS environment. Furthermore, members of the Marine Well Containment Company (MWCC) who supported the Sept. 2 exercise witnessed the SIMOPS group’s decision-making flexibility as they developed the integrated ArcGIS maps.

“Internalizing this response capability, eliminating a single point failure and use of improved technology that is recognized by regulators is a prime example of *Doing Business Better*,” said MWCC Project Integration Manager Dean Davis. “These folks saw an area for improvement and

COLOMBIA

ConocoPhillips is focusing its search for hydrocarbons in Colombia's Middle Magdalena Basin.



Exploring Colombia's shales

BY GUS MORGAN, PHOTOGRAPHY BY PATRICK CURREY

BY THE END OF 2016, CONOCOPHILLIPS PLANS TO REACH A MILESTONE IN COLOMBIA BY TESTING THE PICOPLATA 1 WELL. LOCATED IN COLOMBIA'S MIDDLE [MAGDALENA RIVER VALLEY](#), THE WELL IS PART OF THE COMPANY'S EFFORT TO ANALYZE THE LA LUNA SHALE, AN ORGANIC-RICH SOURCE ROCK.



Alex Martinez, country manager

The Colombia project is currently in the exploration phase. The upcoming Picoplata 1 well tests will be the culmination of years of effort by the Exploration and Business Development groups to determine whether the reservoir is worth developing. Starting later this year, diagnostic fracture injection tests and multiple hydraulic stimulations will begin on Picoplata 1 — a vertical well that was drilled, cored and logged by Shell — providing ConocoPhillips subsurface experts with additional information about the formation.

COAXING SECRETS FROM THE SHALE

“Right now, we have some core and log information,” said Tim Post, completions engineer. “It tells us about the hydrocarbons in place but not the deliverability or flow ability of the reservoir. And that’s why we need to test and flow it. The challenge is determining the optimal spot to land our horizontal well.”

At the Picoplata 1 well location, the hydrocarbons are thought to be at a depth of 15,000 – 16,500 feet. The team will work to pinpoint the ideal production area so that they know where to later drill a horizontal well.



Jack Buswell, exploration manager

BLOCK PARTNER IS VETERAN PRODUCER

ConocoPhillips is operator in VMM-3, holding an 80 percent interest, and Canacol Energy is a joint partner at 20 percent.

“We have a partner that understands Colombia very well,” said Alex Martinez, country manager for Colombia. The two companies worked together during exploration of an adjacent block, Santa Isabel.

ROCKS MUST DELIVER

While many factors will determine ConocoPhillips’ success in Colombia, the project revolves around the quality of the rock. The Picoplata 1 test results will help determine how to proceed. Favorable results will set in motion more drilling in the coming years. According to company geologists, VMM-3 is the ideal area for the type of oil the company is looking to find. Unfavorable results could cause ConocoPhillips to exit the country, an option it retains.

“It would take a very poor result for us to decide to exit after testing the Picoplata 1 well,” said Exploration Manager Jack Buswell, “but it will help us determine how to proceed. If we have



Tim Post, completions engineer

RIGHT: A colorful folk art mural adorns a building in downtown Bogota.

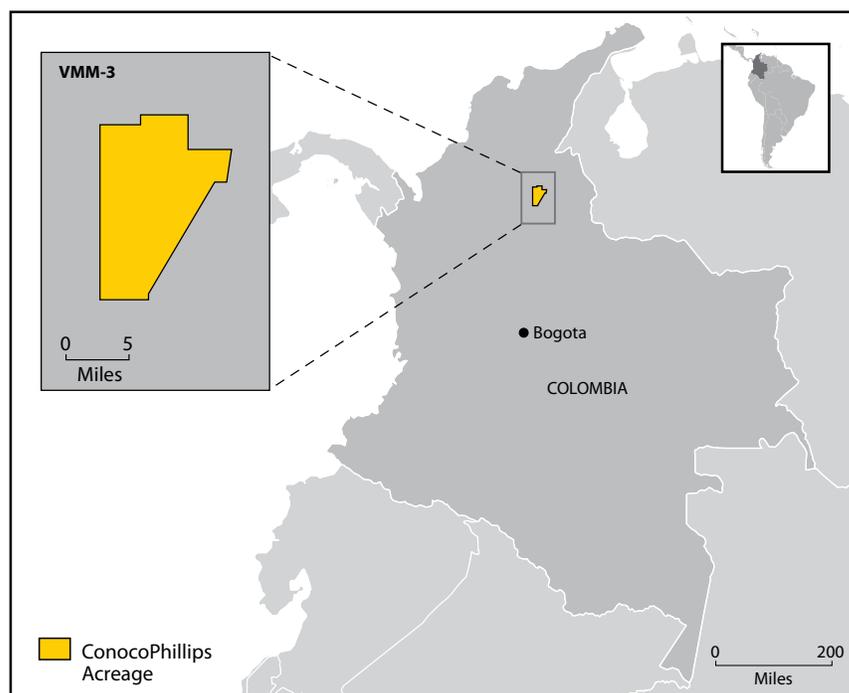




The fertile lowlands of the Middle Magdalena River Valley are well suited for cattle ranching.

Why exploring Colombia makes sense

- By producing oil and gas in more than one country, ConocoPhillips strengthens its diverse global portfolio.
- The cost of doing business is less in today's low-price environment because service companies involved in drilling, completions and general services have lowered their contracting fees as much as 25-30 percent.
- While VMM-3 is a remote area, a reasonable amount of infrastructure is located nearby to get the hydrocarbons to market if production eventually happens, with pipelines, railway lines and a major road system adjacent to ConocoPhillips' block, all leading to multiple refineries.



VMM-3

Operator: ConocoPhillips (80.0%)

Co-venturer: Canacol (20.0%)

In 2015, ConocoPhillips assumed operatorship of the VMM-3 block, which

extends over approximately 67,000 net acres. The block contains the Picoplata 1 well, which was drilled in 2014 and 2015. Continued evaluation and testing of the well is planned in 2016.

success, we will have identified a large resource for ConocoPhillips. The first step is the vertical test. If we like what we see, we will continue down that path.”

To avoid spending a lot before subsurface experts are able to determine the formation’s potential, ConocoPhillips will proceed cautiously, maximizing the amount of information it can gather to enable decisions early in the project. Moving ahead, operational efficiency and monitoring of costs will be critical.

“Minimum cost exposure is key,” Buswell said. Managing the project’s costs and budgets is Finance Manager Joseluis Gonzalez, who is

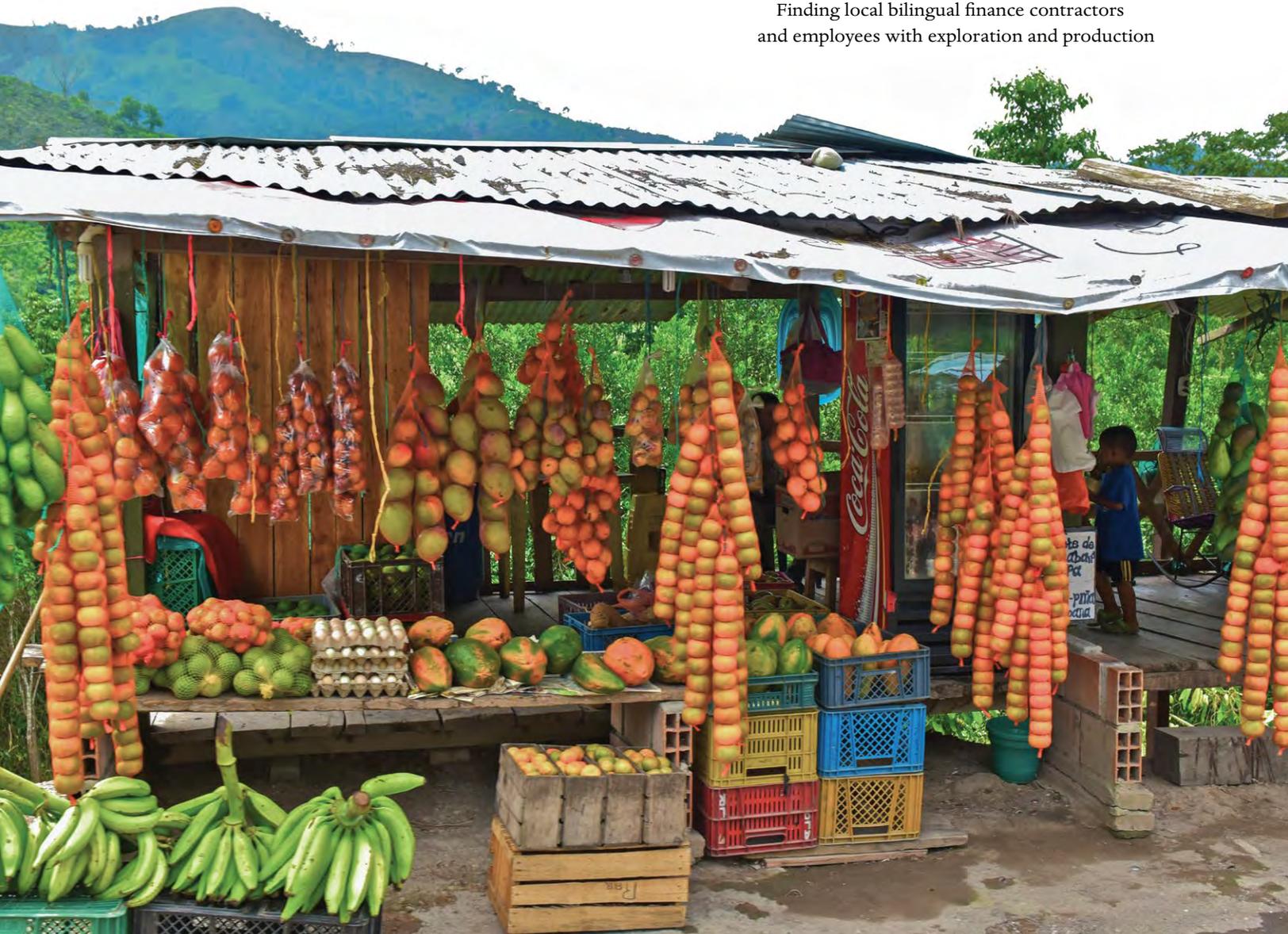
A roadside fruit stand dazzles with its vivid colors and fresh produce.

implementing the proper controls to keep the project on budget and in compliance with partner requirements and local government regulations.

Functional groups providing support include International Accounting, Houston and London Treasury, Bartlesville Treasury Services, Corporate Taxes, ERP Operations & Logistics, Payroll, Accounting Policy, Information Technology and Supply Chain.

“These groups are confronted by daily challenges,” Gonzalez said, “such as implementing SAP, monitoring changes to regulations implemented by Colombia governments, and sharing and following best practices.”

Finding local bilingual finance contractors and employees with exploration and production





Joseluis Gonzalez,
finance manager



Fernando Avila, senior
legal counsel

experience is another task on Gonzalez' list once the project advances to the next appraisal phase.

The project will play out slowly because environmental and operating permits are required.

"Data gathering and analysis will be slow at first," Buswell said, "but will accelerate if we have success. If this works, it's going to be great for ConocoPhillips."

A FIRST FOR COLOMBIA

In December 2015, ConocoPhillips became the first company to sign an Additional Contract for unconventional oil exploration with Colombia's state regulatory body, Colombian Agencia Nacional de Hidrocarburos (ANH).

"One of our strengths is the unconventional," Martinez said. "This contract is significant for us and Colombia."

The oil sector is crucial to the Colombian economy, which has been impacted by the crash in crude oil prices.

Fernando Avila, senior legal counsel, said ANH understands that ConocoPhillips is one of the few companies operating in country with the technical capabilities, financial resources and willingness to develop Colombia's unconventional resources.

Because legal issues are a large component of the Colombia project, Avila has been essential in helping navigate the immense web of legal, contractual and regulatory matters for the

Colombia project.

"You see legal everywhere," he said, "but it's necessary, as ConocoPhillips holds itself to a high standard of complying with rules and regulations."

OPTIONS, CAPITAL FLEXIBILITY

The contract with ANH has commitments over nine years, divided into three-year phases, with exit points at the end of each phase, giving ConocoPhillips numerous options and capital flexibility in a country known for its contractual stability.

"This is the first Additional Contract in the country," said Jose Sanabria, director, Latin America Business Development. "This move further solidifies ConocoPhillips as a leader in the unconventional."

Colombia Acreage and Contract Capture

The team was able to evaluate Picoplata 1 exploration well results, leading to the decision for ConocoPhillips to stay in the block. Through commercial negotiations with Shell as they decided to exit, ConocoPhillips was able to raise its working interest from 30 percent to 80 percent. A joint operating agreement with Canacol, followed by negotiations with the National Hydrocarbons Agency, led to Colombia's first Additional Contract for unconventional oil exploration.



ABOVE LEFT: Colombia social team members Lineth Perozo, Jose Salazar and Adriana Talero work with the residents, community leaders and government entities within Block VMM-3. Not shown is team member Blanca Gonzalez.



Jose Sanabria, director of Latin America business development



Ramon Quintero, HSE manager

ABOVE RIGHT: The [Gold Museum](#) in Bogota is among the city's top attractions. It features a collection of more than 30,000 gold artifacts.

The Picoplata 1 well tests will fulfill the company's contractual commitments for the first phase. In phase two, the company is obligated to drill one well within a three-year period. The third and final phase involves drilling one horizontal well and conducting a seismic program.

TEAMWORK ON A GRAND SCALE

The Colombia project is being managed by an integrated multidisciplinary team located in Colombia and Houston as part of the Exploration, Business Development & Other International organization.

Project execution and compliance is managed by the in-country team, with all other aspects being managed from Houston.



To be successful, the team must be highly integrated, leveraging knowledge from many different groups within ConocoPhillips.

"I could go through every function in this company," Buswell said, "and each one of them is supporting us."

And the other business units at ConocoPhillips have been sharing knowledge and lessons learned with the Colombia team.

"Our colleagues in the Permian and in other



La Catedral Primada in Plaza Bolivar, downtown Bogota

areas of the Lower 48 love to help out," Buswell said. "They are always willing to tell us what's worked for them and, perhaps more importantly, the things that didn't work and how they've moved ahead."

NEAR AND FAR APPROACH

To minimize costs, ConocoPhillips will maintain a small crew at its new Bogota office, with most of the strategic work taking place in Houston.

The in-country team, headed by Martinez, will focus on execution, such as managing the testing of the Picoplata 1 well and ensuring all permits are in place, along with building social networks and expanding ConocoPhillips' in-country presence. The Houston-based team has a broader, more strategic role, organizing planning of the operation

RIGHT: Colombia is filled with vibrant colors that energize and inspire.





ConocoPhillips has an office in Bogotá, the capital of Colombia, a city of eight million people.



Bogotá office

and subsurface interpretations. For example, the data from the Picoplata 1 well tests will feed back to the Houston team. They will manage data interpretation, strategic implications and some of the messaging of that data throughout the company.

“If we have success, it will be great for us and for the country, including the local areas and communities involved,” Martinez said. “Part of our culture is that communities where we work also benefit from our presence. So I see that as a win, all the way around.”

OPERATING SAFELY IN A NEW COUNTRY

Wells Operations Manager Donnie Sperry and HSE and Security Manager Ramon Quintero will

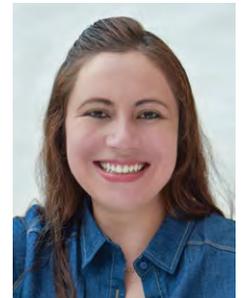
work together in Colombia to ensure the project runs smoothly and safely.

“I believe you can work incident free,” said Sperry, who is responsible for drilling, completions, well testing and production. “My site supervisors will work with Ramon’s HSE supervisors at the well site to establish our safety culture.”

Colombian Engineer Verónica Moyano is part of Donnie Sperry’s team. She will be working with Tim Post to ensure the main contractor at the drill site aligns with ConocoPhillips’ values and expectation with regard to drilling and completions.

“It’s a privilege to be part of ConocoPhillips and the development of this unconventional project in Colombia,” she said, “working with a multidisciplinary team focused on performance, implementation of planning processes and execution.”

Versatility, flexibility and patience are needed when establishing processes and conducting operations in a new country, Sperry said. Some of his key challenges include building business unit processes, overcoming language barriers, contracting skilled workers and training locals.



Verónica Moyano, consulting engineer



Donnie Sperry, wells operations manager

Environmental compliance

ConocoPhillips is currently preparing an environmental management plan (PMA), one of several commitments in the conventional environmental license issued by the National Authority of Environmental Licenses. For the PMA, site specific baseline data are being collected for geomorphology, geology, groundwater, surface water, flora, fauna, air and noise, as well as socioeconomic information within the area of influence defined for the operation. All of this



Lauri Branch,
environmental lead

data will be used to complete an impact assessment so the appropriate mitigation measures can be put in place to avoid or reduce impacts to the environment and communities.

In Bogota, Hector Garcia is managing the environmental consultant contracted to develop the PMA and the sampling and monitoring program.

Another major effort is preparing an environmental impact assessment (EIA) to support the work program outlined in ConocoPhillips' exploration contract.

"We started collecting baseline data for the unconventional EIA in 2015," said Lauri Branch, environmental lead. "The objective of the EIA is to focus on a specific scope of work needed to support future activities at the Picoplata well pad."

As a new operator in Colombia, Branch said, ConocoPhillips personnel will be working to develop relationships with the communities and authorities. Working with Branch on the EIA is Juanita Gil Villa, an environmental consultant in Bogota who manages the day-to-day activities of the environmental contractor hired to prepare the EIA. She reviews data prepared by the environmental contractor, identifies gaps, monitors regulations and also attends regulatory meetings.



Hector Garcia,
environmental
consultant



Juanita Gil Villa,
environmental
consultant

"We have proven expertise in unconventional," Sperry said, "and if Colombia has the resource we think it does, this could revitalize the country's oil production. For sure, it would bolster that entire area and provide jobs and infrastructure. That is years down the road, but it should come."

Quintero is responsible for the HSE and security aspects of the project.

"Everything we do is safety first," Quintero said. "We are completely intertwined with operations. Our expectations are all based on safety."

Part of Quintero's role involves teaching safety leadership to the hundreds of contractors, sub-contractors and ConocoPhillips employees who will be working on the project.

"We train them to become safety leaders and to implement the 8 Life Saving Rules," he said. "We teach them how to take responsibility and ownership for their own safety and that of the people around them. No one goes on location without that training."

Quintero must ensure all the country's regulations are followed and mitigate health and security risks. For example, mosquitoes are prevalent in the area and carry diseases such as malaria and

BELOW: VMM-3 is located in the scenic Middle Magdalena River Valley.





LEFT: The first group of contractors to complete ConocoPhillips' Safety Leadership for Contractors class, taught by Colombia HSE Manager Ramon Quintero, show off their certificates.

BELOW LEFT: Getting around Colombia, whether navigating traffic-congested Bogota or traversing the narrow roads in VMM-3, can be a daunting task. That's why ConocoPhillips uses security drivers to safely transport personnel around the country.



BELOW: Road signs reminds drivers to watch for anteaters and sloths, just two of the many wildlife species that inhabit Colombia.

the Zika virus. Crime also is an issue, so strong journey management and security protocols are in place to protect workers.

One of the biggest safety risks currently facing the organization is driving to and from the well location and around Bogota, Quintero said. Thus, defensive driving is mandatory for all drivers. In addition, GPS monitoring is mandatory for all contractor vehicles in Bogota and in-vehicle monitoring systems are used in all work trucks during field operation.

COMMUNITY ENGAGEMENT TO BUILD TRUST, NEIGHBORLY TIES

One of the risks is social, Quintero said, and ConocoPhillips has a team responsible for communicating with community residents and

government officials on how the project will impact them. Education will be a large part of the social effort, he said, and the team will be spending time with locals who are concerned about water use and contamination.

Quintero and Sperry said it's imperative to communicate effectively with all stakeholders to help them understand the benefits and address concerns that come with energy development.

"People fear the unknown," Sperry said. "To try and get people to be more accepting of us, we have to help them understand what we're doing, how we do it and how the activities can benefit the community. We will have to show them we can be a good neighbor and that we'll do what we say we'll do." ■



Cost of supply: The lowest always wins

BY JAN HESTER

SUPPOSE YOU'RE IN THE FINE JEWELRY RETAIL BUSINESS AND YOU WANT TO SET YOURSELF APART FROM THE COMPETITION. YOU COULD DIFFERENTIATE YOUR BUSINESS BY SELLING HIGHER QUALITY GEMSTONES AT COMPETITIVE PRICES, WHILE CONTROLLING COSTS TO MAXIMIZE YOUR PROFIT.



Strategy, Exploration & Technology Executive Vice President Matt Fox

It's different in the oil and gas industry, where the products are commodities and quality is not a differentiator.

"We really only know two things in this business from an economics perspective," said Strategy, Exploration & Technology Executive Vice President Matt Fox. "We know that we can't forecast price, and we know that lowest cost of supply always wins."

Business units throughout ConocoPhillips, with the support of corporate experts, are working to create and implement solutions that reduce cost of supply. In the process, they're making the company more competitive and better positioned for the future.

UNDERSTANDING COST OF SUPPLY

"You might think of cost of supply as a targeted break-even point. For ConocoPhillips, that point is the price at which we achieve a 10 percent return on capital invested," said Chief Technology Officer Greg Leveille.

The cost of supply metric takes into account all the costs associated with producing a barrel of oil (or its gas equivalent) from a major project or development program. For example, if the cost of supply for a barrel of crude was \$40, it might

break down to \$7 in operating costs, \$18 in capital costs and the remaining \$15 covering royalties, taxes and the time value of money.

"Technically, cost of supply is the average price required for a project to achieve the company's cost of capital," said Fox. "In practice, it's the

The point is this: In a commodity business, the way that you win is by having the lowest cost of supply. —MATT FOX

primary metric we consider when we're deciding which projects will be funded when we're allocating capital across our resource base. The company is not giving up on traditional economic measures of merit. But by emphasizing cost of supply, we're sending a clear message that, in a lower, more volatile price environment, our capital investments need to be competitive at low prices. It's a change of emphasis, and it's important."

Steve Bross, vice president, Resource Conversion, notes that the focus on knowing cost of supply represents a fundamental shift in how ConocoPhillips does business.

"Five years ago most people in the business units could quote their project's rate of return and the net present value generated. Now managers need to understand at what oil price they break even and



Chief Technology Officer Greg Leveille



Well site in the Eagle Ford

ask themselves if they're investing capital as efficiently as possible," said Bross. "But while cost of supply is critical, it isn't the only measure of merit to consider. Investment decisions must also factor in value, strategic drivers and stakeholder issues."

"It's time to get creative and to look at alternative development scenarios at a level of granularity that allows you to find the small gems." —STEVE BROSS

REDUCING COST OF SUPPLY

In an environment where projects compete internally for limited capital, teams around the company are finding innovative ways to reduce their cost of supply.

"That's what we want everybody to do," said Fox. "People focusing on reducing the cost of supply will look for ways to simplify, standardize and apply new technology so that they can compete more effectively, while still maintaining our

commitment to operating safely and in an environmentally sound manner. And that's a healthy thing."

Bross and his team provide support to business units working to reduce their cost of supply. They

are not, however, trying to reinvent the wheel.

"We serve as facilitators," said Bross. "We're trying to ensure a consistent application of best practices across the company's portfolio. The guidelines and best practices all exist. We just have



Resource Conversion Vice President Steve Bross



Seth Crissman, manager,
Gulf Coast business unit
Drilling & Completions

to have the discipline to apply them.”

Bross emphasizes the importance of understanding all production-related costs at a granular level of detail. “We’re chasing the small dollars now. We have to look at our assets and identify low cost of supply, embedded sweet spots.”

Identifying those sweet spots means taking a different approach to developing resources and finding the most effective solution from a cost of supply perspective. For example, the most efficient way to

develop a field may not be the traditional approach.

“It’s time to get creative and to look at alternative development scenarios at a level of granularity that allows you to find the small gems,” said Bross.

Fox notes that many parts of the company have a huge resource base. But not all of that resource base is created equal. For example, the geology might vary in quality, or some of the resource might be located closer to existing infrastructure, making it less costly to produce.



NGL stabilizer
tower at Helena in
the Eagle Ford

“In other words, the cost of supply could vary across the resource such that there’s a sweet spot of low cost of supply within something that, if we simply looked at the average, would be less competitive,” said Fox. “We have to be honest with ourselves and invest in things that will provide us an economic return at low commodity prices. And if the prices increase, we’ll get a really good return. The point is this: In a commodity business, the way that you win is by having the lowest cost of supply.”

EAGLE FORD: RELENTLESSLY DRIVING DOWN COSTS

The Eagle Ford project in ConocoPhillips’ Lower 48 region is a good example of how focusing on productivity improvements and technology advances can bring down cost of supply. Over the past two years, the business unit has reduced its cost of supply through a shift from acreage capture to pure development, operational efficiencies and advanced data analytics.

“Originally, we had to drill on a lease to be able to own it,” said Seth Crissman, manager, Drilling & Completions. “Since work was planned around critical lease dates, we might have to stop operations on a rig and move it somewhere else to capture that opportunity. Once we’d captured all the leases, we could start optimizing to drive costs down.”

“If we cut our cost per well by \$1 million, with over 4,000 wells left to drill over the next decade-plus, we could save the company \$4 billion.” —HELENE HARDING

Since moving into the development phase, the team has incorporated solutions such as “lean” practices and multi-well pads into their operations.

Completions Manager Rob Clark, with the support of his team, incorporated the [lean concept](#) into the completions process. Originally introduced in Japan to streamline manufacturing, lean is a method for eliminating waste from a process. Applied during the pure development environment, the lean approach has contributed to a

300-percent increase in efficiency across completions operations.

“We analyze each person’s work steps, tools and how they plan their work,” said Clark. “Then we look at each component of the process and try

“We’re utilizing data analytics to identify trends that made us successful and making sure we repeat them.” —SETH CRISSMAN

to identify ways to work in parallel. For example, if there are five steps involved — A, B, C, D and E — we would determine if A and B could be conducted simultaneously instead of sequentially. This optimizes the process and reduces costs.”

Multi-well pads (drilling multiple wellbores from a single surface location) have enabled the Eagle Ford team to standardize processes and introduce economies of scale.

“Working with five or six wells in one location reduces the cost and time it takes to drill and complete a series of wells,” said Crissman.

Another contributor to Eagle Ford’s reduced cost of supply is the use of big data in both drilling and completions.

“It’s a big piece of the puzzle,” said Helene Harding, vice president, Gulf Coast business unit. “Drilling rigs collect a vast amount of data that

we can use to learn how to drill more efficiently and consistently. The data warehouse developed by the Eagle Ford Integrated Operations of the Future (iOF) team

enables us to rapidly pull and analyze data that previously resided across numerous applications.”

Crissman seconded that motion. “We’re utilizing data analytics to identify trends that made us successful and making sure we repeat them.”

Harding notes that any improvement made in the Eagle Ford, the company’s largest producing asset, has a huge multiplying effect. “If we cut our cost per well by \$1 million, with 4,000 wells left to drill over the next decade-plus, we could save the company \$4 billion.”



Rob Clark, completions manager, Gulf Coast business unit



Helene Harding, vice president, Gulf Coast business unit



Strategic Sourcing & Category Manager
Gene Till



Europe & North Africa President
Trond-Erik Johansen



Bill Arnold, general manager, Norway Operations

CAPTURING DEFLATION THROUGH SUPPLY CHAIN

When crude oil prices began to decline, in November 2014, Supply Chain put together a global team to capture deflation.

“We were paying high rates for services because demand was high and the market was heated,” said Gene Till, manager, Strategic Sourcing & Category Management. “As prices decreased and the market began to cool, we launched an effort to capture that deflation by renegotiating provider contracts to bring them more in line with the lower commodity price environment.”

Till cited the Surmont Regional Residence camp as an example. “Catering and support services are a large component of our costs. The market was strong up to mid-2015, and there wasn’t additional capacity to accommodate the large workforce in the Canada oil sands. Now that demand is lower and projects have become more operationally focused, camp service providers are lowering prices while providing the same or enhanced levels of service. This forces efficiency down the chain, and suppliers are getting smarter and more efficient at delivering services.”

He noted that it’s important to make sure vendors stay competitive. “We need good relationships going forward, so we’re proactively monitoring the financial health of our key suppliers. We depend on them, and we want them to make a fair profit.”

The market naturally follows oil prices, and Supply Chain’s strategy is to follow as closely as possible on the way down by renegotiating when necessary. “As prices increase, we try to lock in the price as long as possible and slowly follow the curve up.”

Till noted that the biggest challenge right now is thinking long term. “In the Lower 48, it’s important to be able to turn things on and off quickly. In 2014, we had 30 rigs operating, most on short-term lease. The three we currently have



Deflation Capture

operating are on long-term lease. If we had pursued a long-term contract strategy in the past, we would be obligated to pay \$27,000-30,000 per day for rigs currently racked in the yard that now cost \$18,000 per day.”

Till’s team and business unit Supply Chain groups will have the challenge of designing a future strategy.

“Our preferred approach would be committing to market share instead of a certain volume. In other words, ‘we can’t tell you how many rigs we’ll need, but we can tell you they’ll be your rigs.’”

NORWAY: UNMANNED PLATFORMS

As commodity prices decreased, project costs led to unattractive economics for future North Sea opportunities. To address escalating development costs, Trond-Erik Johansen, president, Europe & North Africa, charged a task force with developing facility concepts, project strategies and execution models that would reduce cost of supply and shorten project execution time. A key goal was to standardize design and functionality, using a project factory approach that could be repeated throughout an area instead of re-engineering for each individual situation.

Tor Inge Hansen, manager, Capital Projects Europe & North Africa, noted that the effort was driven by an integrated business unit team from

“Our preferred approach would be committing to market share instead of a certain volume. In other words, ‘we can’t tell you how many rigs we’ll need, but we can tell you they’ll be your rigs.’” —GENE TILL

Projects, Operations and Drilling. “The solution is a remote, unmanned wellhead platform (UWP) that can be tied back to existing production facilities. The platforms will also be standardized so the same solution can be used in serial projects to help us stay competitive.”

With minimal facilities, the unmanned platforms require less maintenance, few visits and no overnight stays. The UWP is accessed via a service

operation vessel specially equipped with dynamic positioning capability, keeping the high-tech bridge stable as the ship moves with the wave action.

“The development concept enables our workforce to essentially walk to work,” said Bill Arnold, general manager, Norway Operations. “UWPs will help us reduce cost of supply to a level where we can get these projects funded.

That’s what makes the minimum platforms so valuable. They extend

the life of our investments in the Ekofisk complex and increase our odds of getting marginal discoveries sanctioned.”

Johansen noted that the team isn’t resting on its laurels.

“We originally set a target cost of supply of \$40 per barrel, but we’re now aiming at less than \$35 per barrel,” said Johansen. “Our team is doing a great job at lowering the cost of potential new developments. Because they’re standardized, these UWPs can be applied to projects in both Norway and the U.K. In addition to the UWPs, the business unit is also progressing subsea technology and looking at ways to reduce drilling costs.” ■



Tor-Inge Hansen,
manager, Capital Projects
Europe & North Africa

Unmanned work platform features include:

- Genuinely unmanned facility: few visits and no overnight stays
- No helideck: access is via service operation vessel
- No welfare functions or processing
- Lighter topsides: 1/3 the weight of Embla wellhead platform
- Electric crane
- Escape chute
- Power and utilities from host
- Navigational aids and CCTV
- Production manifold and ESDV
- Simple gas and fire detection
- Closed drain system
- Capabilities for light well intervention



A specially designed service operation vessel moored at an unmanned wellhead platform in the North Sea

PHOTO COURTESY OF AMPELMANN OPERATIONS B.V.



Anita Hellum

A heart for Ekofisk

BY KJELL UNDALL

HER PASSION FOR TRAVEL HAS TAKEN HER FROM VEGAS TO VIETNAM. But the [Ekofisk field in the Norwegian North Sea](#) feels like home because that's where her heart is.

When Anita took a summer job before her 18th birthday, little did she know that 33 years later she would still be working for ConocoPhillips. "My first assignment was as a telex operator in the Stavanger office for the Ekofisk 2/4 K water injection platform team. I had a 50-mile journey to work and often left home at 6 a.m. to travel by train and bus to get to Tananger before 8."

Anita's original plan was to go back to school

people in the Greater Ekofisk Area at any given time. As coordinator for logistics and accommodation, Anita has gotten to know many people over the years.

One of those hectic periods will occur this summer during Shutdown 2016, when Ekofisk stops production for two weeks of routine maintenance. There will be numerous people to transport, feed and accommodate during the round-the clock campaign. Anita also has an important role to play as a member of the offshore emergency preparedness team.

Throughout her career, Anita has had various office assignments, but it doesn't take long before she wants to go "home."

"After my daughter Christine was born, I was back at Ekofisk six months later. My mother was a big help when I was away for two weeks at a time."

Platform life obviously didn't discourage her daughter. "After qualifying as a process technician, Christine also started to work offshore and is now a third generation Hellum at Ekofisk," said the proud mother.

It should come as no surprise that Anita's partner also works at Ekofisk. They both love traveling, and when they have time off, they enjoy visiting the Spanish island of Gran Canaria, especially during the long northern European winter. In addition to walks in the mountains and sunbathing, she helps out at a rescue center for dogs. During the summers, the couple spends time at their summer house, a small 19th century sailor's cottage in the Norwegian [coastal town of Kragerø](#).

Travel has also taken them further afield, and road trips in the U.S. are a favorite. They have already driven parts of Route 66, and hope to go back and do the rest, in the direction of Chicago, between her two-week shifts in the North Sea.

What started as a summer job has already lasted more than 30 years. But it still feels special to her: there is no other place like Ekofisk. ■



and become a teacher. She took a secretarial job at Ekofisk and, after a few months in the office, traveled the 180 miles by helicopter for the first time to Norway's legacy oilfield in the Norwegian North Sea. "It was love at first sight," she said. Her dad had worked there since 1978, so she knew a little about what to expect.

Over the years, many things have changed, but Anita's passion for Ekofisk remains the same. "After I've been home on leave, it always feels good to get back to work and meet all my colleagues again." During busy periods there can be up to 700 people at the complex, with roughly 1,500



ConocoPhillips

Anita Hellum



Manish Pradhan

An American success story

BY GUS MORGAN



MANISH PRADHAN MISSES HIS VIEW of the snow-capped Himalayas from his hometown of **Kathmandu, Nepal.**

Times have changed for Manish, who immigrated to America in 2002 with his father and mother. These days, Manish calls Houston home, and the city’s skyscrapers are his new mountains. But Kathmandu, where the Pradhan family lineage stretches back 10 generations, remains a key

As a business analyst at ConocoPhillips, Manish supports the Lower 48 Geology, Geophysics and Reservoir Engineering user groups, helping colleagues with their information technology needs and requests.

Josh L. Hanke, a solution integrator for the Rockies Apps & Data group, who went through the IT New Hire Program with Manish in 2007, said Manish possesses strong technical, organizational and collaborative skills that make him a valued team member, mentor and leader.

“Manish is super friendly and is always sporting a bright smile,” Josh said. “He’s outgoing, helpful and dependable.”

In 2000, Manish, on behalf of his parents, applied for the U.S. government’s diversity visa program, also known as the green card lottery. Each year, the program grants 50,000 permanent resident cards to countries like Nepal with low immigration rates to America. Manish’s father, Mani B. NhuchhePradhan, wasn’t keen on completing the application, so Manish filled it out for him.

A year passed before Mani learned he was a lottery winner, a remarkable stroke of luck considering the U.S. State Department received approximately 13 million entries for that application period. After going through interviews and additional paperwork, Mani was given a permanent resident card authorizing him to live and work in the U.S. and entitling him to all the benefits of a U.S. citizen. As his dependents, Manish and his mother, Nirmala Pradhan, also received green cards.

The Pradhans knew America was a land of opportunities and embraced the challenge of settling in a foreign land, despite having to start from scratch.

“Your success in the U.S. all depends on how much you are willing to push yourself,” Manish said. ■



Manish and his wife, Anusuya Shrestha

part of his identity and is always on his mind.

“Appreciate where you came from,” Manish said, “as that is what defines you.”

Manish embraces change, and he’s as adept at looking ahead as looking back, having successfully meshed his past with his present. He’s living the American dream, his unique cultural background helping form the backbone of a nation whose strength lies in its diversity.





Bob Banks

Inspired inventor

BY COURTNEY TIMM

BELOW: Bob designed the Work Area Safety Pack to reduce the number of injuries caused by dropped objects when working at height.

OPPOSITE PAGE: Bob stands against the backdrop of the cantilevered railway bridge that crosses the Firth of Forth near Edinburgh.

AFTER 16 YEARS OFFSHORE, Bob Banks knows the challenges of working safely and efficiently in this unique environment. But what's distinctive about Bob is his ability to create innovative solutions to make life easier, and work safer.

"Anyone who has ever worked offshore is well aware of how time consuming it can be to carry out the simplest of tasks," said Bob, a mechanical maintenance technician who has worked with Petrofac most of his offshore career. "I wanted to make the job easier, while also eliminating dropped objects and other hazards."

Bob's solution was to create the Work Area Safety Pack. Successfully trialed on the Britannia platform, it features a lightweight drop mat that doubles as a wind break, barriers, signs, tool transfer bag and rope.

"The mat can be secured to grating with Velcro straps to prevent it from blowing in the wind. It can also be attached to scaffold or railings to act as a windbreak. The padded center section provides protection when kneeling on the grating

and can be rolled up and secured with the shoulder strap, which allows the operator to have two hands free for handrails or ladders, and is narrow enough to clear backscratchers."

But that's not the beginning, or end, of Bob's impressive ingenuity. He also designed and built a more efficient barrier system, and after the successful six-month trial on Britannia, Petrofac distributed samples across their assets worldwide.

Before joining the oil and gas industry, Bob worked for a wire and cable company, where

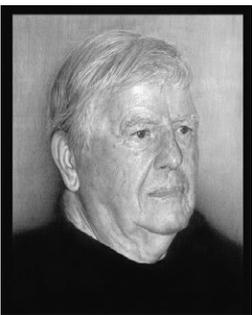
he designed and built a lifting apparatus in his spare time from scrap material. "Management was impressed and sent the equipment off to be certified. All the equipment I designed was used in the factory after that."

Bob says his most satisfying contribution was for a supplier that employed disabled workers. "I used to design and manufacture jigs and fixtures for anyone who had difficulty holding cables and wires during soldering operations. That was very rewarding."

Bob was a finalist for the U.K. Oil and Gas Industry Safety Award for Innovation and received a ConocoPhillips Safety Ambassador award in 2015. He lives with his wife, Beverley, in Dunfermline, Fife, Scotland, but he was born and raised in North Queensferry, a small village between the road and railway bridges that cross the Firth of Forth. His father worked on maintenance of the Forth road bridge for most of his working life.

A shared interest in mechanical maintenance isn't the only thing that runs in Bob's family. "My dad was my main inspiration. He could turn his hand to anything. He had two poetry books published, was a very good artist and was always building and designing things," said Bob, who also writes poetry and loves drawing. "My son Liam, working in New York, has a master's degree in art, and my cousin was the science fiction author [Iain M. Banks](#). So creativity tends to run in the family."

Bob is motivated to use his creativity to help keep others safe. "A work colleague was injured recently when a container door closed on his leg during high wind. I built and tested a very simple and practical solution that will prevent any size container door from closing unexpectedly. The hardest part, though, is finding a manufacturer to produce it as quickly as possible. I want to prevent any similar future injuries, and I'm determined to make it happen." ■



Pencil drawing of Bob's father by his son Liam Banks



Fighting the Beast

ConocoPhillips Canada responds to the Fort McMurray wildfire

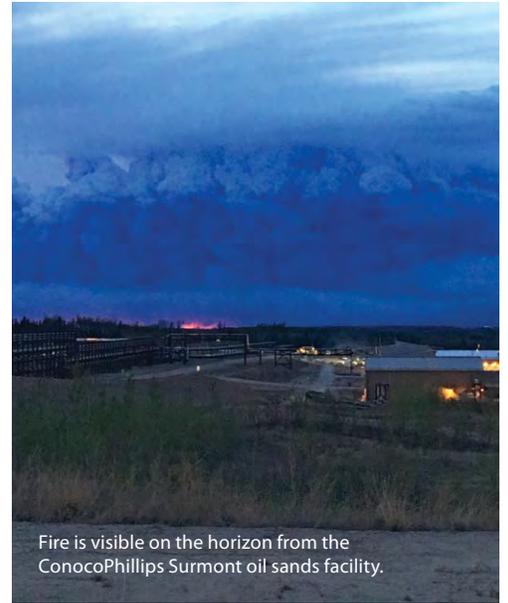
BY KATHERINE SPRINGALL

It all happened so fast. On Monday, May 1, wildfires were spotted on the edges of the city of Fort McMurray, Alberta. Staff at the [Surmont oil sands facility](#) and in Calgary were closely monitoring the situation, but they never imagined the magnitude of the fire headed their way.

The growing threat led Vanessa Rawlins, Surmont field superintendent, to mobilize the incident command team. The fire, which came to be called the Beast, moved quickly, and at 6:20 p.m. on Tuesday, all of Fort McMurray's 80,000 residents were ordered to evacuate.

At that point, the ConocoPhillips team turned their attention to supporting the public and first responders, providing beds to 199 evacuees who arrived at the site that day.

"I've always been proud to work for ConocoPhillips, but for me this moment really showed who we are as a company," said Ben Way, business improvement manager for Oil Sands. "All the evacuees were so grateful for anything we could do to support them: we had babies that needed formula and dogs that needed food, so we went and got it. I was so glad we could help them in such a tragic situation and so honored



Fire is visible on the horizon from the ConocoPhillips Surmont oil sands facility.

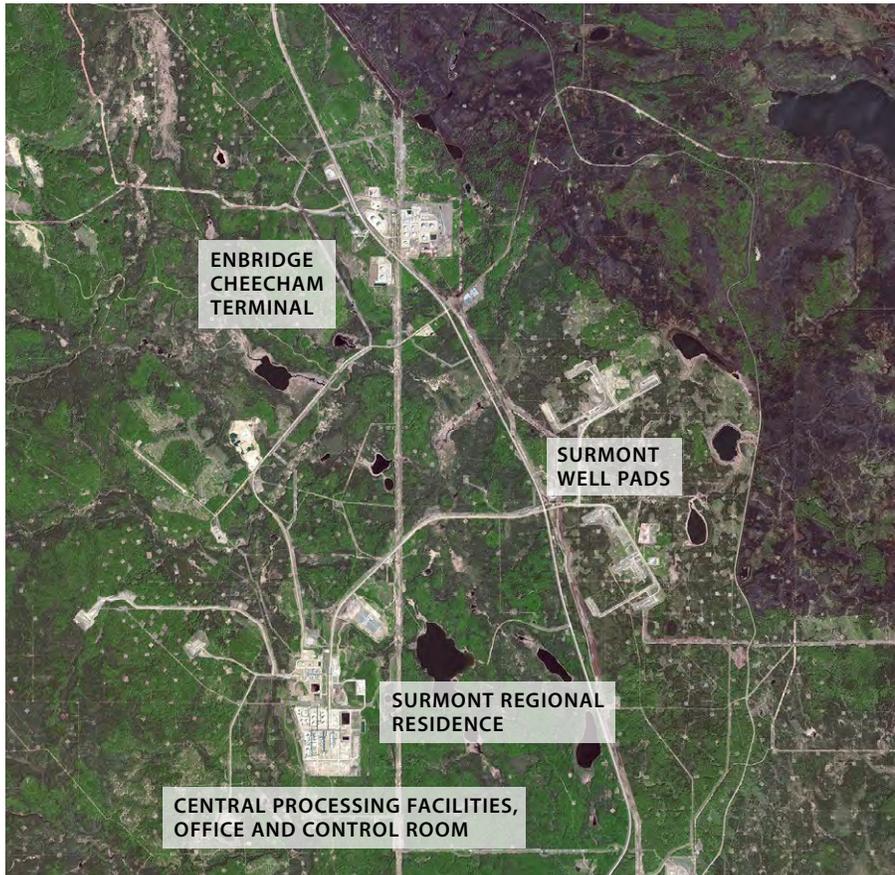
to hear their stories."

The fire continued to move closer, and on Wednesday evening, after key industry infrastructure nearby was shut down, the team began to safely shut down Surmont and plan for an evacuation. With the fire visible on the horizon, an orderly exodus began, starting with

ConocoPhillips and its employees have donated more than \$375,000 to the Canadian Red Cross and other charities providing disaster relief and care for those impacted by the wildfire. Additionally, a ConocoPhillips community response team is working with communities to help support their long-term recovery.

the 199 members of the public sheltering in the residence.

"The level of professionalism exhibited by the staff at Surmont was amazing," said Way. "They were absolutely confident and in control at all times. There was no rushing around, no panicking; they



This satellite image shows the proximity of the wildfires to ConocoPhillips' Surmont operations. The burnt areas appear in dark brown.

Young investor travels to Houston for 2016 Annual Meeting of Stockholders

An 18-year-old Georgia high school senior traveled to Houston May 10 to attend ConocoPhillips' Annual Meeting of Stockholders. Logan Smith used money he made during a summer job to purchase ConocoPhillips shares (NYSE: COP) last year.

During the meeting's Q&A session, Smith stood up to thank Chairman and CEO Ryan Lance for the opportunity to experience a stockholder meeting and "to see the steps you're taking to grow ConocoPhillips and make sure that the investments I'm making are good investments." Lance noted that Smith and his father had traveled from Georgia to be at the meeting. "You give us a lot of confidence in the future," he told Smith.

Lance delivered a presentation on the company's performance and priorities during the Annual Meeting, his fifth as chairman and CEO since the company's 2012 emergence as an independent oil and gas production company. Also in attendance were the other nine members of the board of directors and seven

members of the Executive Leadership Team. Legal Senior Vice President, General Counsel and Corporate Secretary Janet Langford Carrig reported on the voting results of five proposals during the formal business of the meeting.

Following the meeting, Lance conducted a brief news conference with media representatives.

Smith was pleased that he and his father traveled all the way from suburban Atlanta to attend. "I've never been to an annual meeting before," he said. "It was quite an educational experience. I learned a lot about how the process works." ■



High school student Logan Smith (center) and his father talk with Investor Relations & Communications Senior Advisor Bill Stephens before the 2016 Annual Meeting of Stockholders.

followed our shutdown and evacuation procedures step by step. It's thanks to them that not one person was hurt."

With shutdown tasks complete and all members of the public and the majority of staff evacuated, supervisors cleared every building one by one and shut down the power as they left.

"It was surreal," Way said. "I remember leaving the Multi-Purpose Building and noticing how quiet and dark it was for a place that's normally bustling with activity. It was difficult to see this massive facility that we worked so hard to build, and so hard to start up and operate, shut

down and empty."

In the coming weeks, the fire would grow to cover over 1.275 million acres, about the size of the state of Delaware or the Canadian province of Prince Edward Island. While the incident command team continued to monitor the fire, members of the evacuated Surmont team joined their colleagues in Calgary to begin creating the remobilization and restart plan.

"I have so much confidence in this team," said Ed Connelly, vice president, Oil Sands Operations. "They take such pride in their work, and they want to see

Surmont up and running. I know we are going to do it safely and do it right."

After the fire receded and conditions were safe, a team was sent to Surmont to assess its condition. A thorough inspection of Surmont well pads, central processing facilities, water source wells and on-site residence indicated very minor damage with no impact to ongoing operations. On May 24, nearly three weeks after the site was evacuated, employees began returning to Surmont. Shortly after, production safely resumed and is now expected to ramp up to meet 2016 targets. ■

Getting a handle on public policy

Public policy decisions can pose both challenges and opportunities for ConocoPhillips' global operations. To ensure its interests are fully represented, the company engages in advocacy at home and abroad on issues affecting its business, employees and the communities where it operates.

So, exactly what is public policy and how does it impact ConocoPhillips?

"In short, it's a system of laws, regulatory measures and courses of action endorsed by local, state and federal government entities," said Public Policy Manager Melissa Shute. "It is part of an ongoing process that does not always have a clear beginning or end, since decisions about who will benefit from policies and who will bear any burden resulting from them are continually reassessed and revised."

ConocoPhillips has a clear [public policy mission](#): to establish enterprise-wide positions and strategies on the issues which may, if unmitigated, result in harm to the company's operations, value or standing. "In other words, if we don't take

unconventional reservoir development and production.

To address these issues, the team is sharing information with scientists and state geologists to advance public understanding of induced seismicity as well as help researchers arrive at science based understanding and conclusions.

"We've been working with our subject matter experts as well as other



Shute and Felton record a public policy podcast on the ConocoPhillips Podcast Network.

organizations involved in the science of seismicity," said Felton. "If there is federal regulation, we want to make sure it is consistent with sound science and our operations and is an appropriate response to the issue or challenge."

The company's Public Policy function, part of the Corporate Planning & Development department, maintains an open-access intranet site with a general

could affect its business objective.

"The site includes processes and timelines, the strategic advocacy framework and examples, the public policy communications policy and a corporate heat map that identifies the biggest issues we face," Shute said.

While the corporate Public Policy team is responsible for global position statements and messaging, many communications come directly from practitioners in the global business units.

"They own local messaging and are most qualified to determine which local issues need to be addressed," Shute said.

"We maintain good working relationships with the business units. We share fit-for-purpose tools, provide a frame-

work that can be used globally and serve as a resource. If a specific group is thinking about doing advocacy on an issue, we might be able to provide best practices or applicable knowledge from other business units engaged in similar activities."

Another good source for information is the company's [Power in Cooperation \(PIC\) website](#), [powerincooperation.com](#). Content is shared by Public Policy, [Investor Relations](#) & Communications and Government Affairs.

"Much of our advocacy work is focused on location-specific issues, and the PIC site is a great resource for learning how we approach them at a local level and how individuals can participate," Felton said.

The ConocoPhillips approach to public policy is neatly articulated on the PIC site: "Energy is everywhere, and the complex issues pertaining to responsible oil and natural gas production spark conversations in communities across America. We believe cooperation starts with information and informed discussion leads to good policy decisions." ■

Energy is everywhere, and the complex issues pertaining to responsible oil and natural gas production spark conversations in communities across America.

any action, these issues could possibly impact our bottom line, our consumers or our employees," Shute said.

Public Policy Director Gina Felton pointed to a recent high priority issue that is gaining government and regulatory attention — seismicity in North America. A dramatic rise in earthquakes in Oklahoma has been attributed to the increase in wells used to dispose of produced brine water associated with new

overview of issues, internal and external networks that play a part in the public policy process and government actions being taken or considered. Another site for company leaders and global public policy practitioners features talking points for use with external stakeholders and regulators, briefing documents, business unit-specific issues and comments submitted by ConocoPhillips to the federal government on regulations that

ConocoPhillips funds wetlands restoration on Texas coast

TEXT AND PHOTOGRAPHY BY GUS MORGAN

The [Texas Rice Industry Coalition for the Environment \(RICE\)](#) is restoring 190 acres of freshwater wetlands on the Texas coast with the help of a funding grant from the ConocoPhillips [SPIRIT of Conservation and Innovation Program](#).

Freshwater wetlands adjacent to the Texas bay systems and Gulf of Mexico are vital resting, feeding and watering habitat for millions of migratory and resident birds. But this type of freshwater habitat is disappearing at a rapid rate due to development, agriculture and subsidence.

Bill Stransky, executive director of Texas RICE, is overseeing the restoration project on the 15,000-acre Halls Bayou Ranch, an important watershed located on the north side of West Galveston Bay, approximately 65 miles south of Houston. The land, located next to the [Brazoria National Wildlife Refuge](#), is a mixture of marshes, created wetland units, rice fields and native prairie.

"This restoration project is a way to replace the resources that were on this landscape historically," Stransky said. "It's incredibly important for migratory birds, resident birds, fish, amphibians, reptiles and other wildlife. If it wasn't for the restoration work we're doing, there wouldn't be water out there and these birds would not have that habitat. This is critical

habitat for the shorebirds that are migrating across the Gulf of Mexico this spring from places such as Panama, Colombia, Brazil and Argentina. And in winter, you can sometimes see tens of thousands of migratory birds in these fields."

Most of the project involves creating wetlands on abandoned farmland, where levees are being constructed to hold large acreages of shallow water. These areas will naturalize into

RIGHT: Restored freshwater wetlands like this flooded field in Brazoria County provide valuable habitat for migratory and resident birds on the middle Texas coast.

BELOW: Bill Stransky, executive director of the Texas Rice Industry Coalition for the Environment, right, shows Eric Forward, an assistant director with the [National Fish and Wildlife Foundation](#), an example of a restored freshwater wetlands area in Brazoria County.



high-value habitat for many species of migratory and resident birds, including many of concern, such as the mottled duck, whimbrel, white ibis, buff breasted sandpiper, yellow rail, black rail, redhead and canvasback, along with dozens of other shorebirds, waterfowl and wading birds. Texas RICE has a long and successful track record of creating and restoring wetlands utilizing the same methods underway at Halls Bayou Ranch.

These wetlands will attract birds throughout the year and add value by improving the quality of the water that runs into Halls Bayou and other watersheds that empty into Galveston Bay. As part of the project, large numbers of non-native plant species, mainly Chinese

tallow, are being eliminated. In addition, the project area will provide supplemental fresh water during dry periods, providing excellent habitat throughout the year to a large number of bird species.

The [National Fish and Wildlife Foundation \(NFWF\)](#) administers the [ConocoPhillips SPIRIT of Conservation and Innovation Program](#), a partnership between ConocoPhillips, NFWF and the [U.S. Fish and Wildlife Service](#). The program leverages public funding through NFWF with private money for conservation projects. The program recently awarded a \$40,000 grant for the Halls Bayou project, and matching funds from Halls Bayou Ranch (\$54,000) and Texas RICE (\$6,000) brought the total to \$100,000. ■

Bringing light to the dark: Plus water filters and giant araipaima

BY SANDRA DUNCAN

Playing a part in the company's global signature community investment program, the 18th [St Andrews Prize for the Environment](#) was recently presented for 2016. This year's winners are focused on sustainability, conservation, biodiversity stewardship, clean water, affordable energy and community development, all of which are aligned with the company's business strategy.

This year's overall winner, [Liter of Light Brazil](#), was announced at a ceremony at the University of St Andrews in Scotland in April. The project aims to empower people living without electricity in remote riverside communities in the Amazon by teaching them how to create sustainable light sources using basic equipment.

"Sometimes we don't realize how important light is for our lives, how it makes it possible for a child to read a book during the night, for parents to cook a meal or a doctor to treat the ill. This support will help us improve peoples' lives, and it will make a real difference within these communities."

—VITOR BELOTA GOMES

An estimated 1.3 billion people in the world and more than three million people in Brazil suffer from energy poverty. Liter of Light provides sustainable lighting, free of charge to dwellings around the world. Their simple day device consists of a recycled plastic bottle filled with 10 milliliters of bleach and distilled water. Fitted through galvanized steel sheet roofing of a home, the device refracts sunlight to provide the same amount of light as a 55-watt lightbulb to the space below. Their night

lighting is an easily maintained solar battery upgrade kit that is community built for \$20, or \$50 for streetlights. It consists of LED bulbs, a simple circuit panel, battery and micro-solar panels to provide low cost lighting at night.



LEFT: Happy to have light, a child plays under a street light in the Philippines. PHOTO COURTESY OF LITER OF LIGHT, PHOTOGRAPHER KIT REYES

This technology was developed by student engineers following a process that can easily be replicated by anyone around the globe, using readily available materials and basic electronic skills. Rather than relying on large-scale, imported or close-patented technologies, the project seeks to create a grassroots green lighting movement.

"Liter of Light follows three guiding principles," said Dave Farthing, manager, U.K. Decommissioning and a St Andrews Prize trustee. "The materials used to build the solar lights should be readily sourced and easy to replace, the skills needed to manufacture the light sources should be minimal, and the project should contribute to the livelihood of local communities."



Dave Farthing

There are still around 600 communities in the Amazon without a regular electricity supply. The \$100,000 prize money will be used to help develop Liter

of Light's solar technology within the riverside communities of Dominginhos, Bararuá, Jacarezinho and São Jorge do Membeça.

"We will now be able to expand our efforts in Brazil and bring light to those who need it most – families living in isolated riverine communities," said project team member Vitor Belota Gomes.

"Sometimes we don't realize how important light is for our lives, how it makes it possible for a child to read a book during the night, for parents to cook a meal or a doctor to treat the ill. This support will help us improve people's lives, and it will make a real difference within these communities."

The project is not only about the technology, but also how Liter of Light works directly with the communities to teach basic electrical

skills, while empowering them to produce the lighting systems themselves and be responsible for their own maintenance and expansion.

RUNNERS-UP

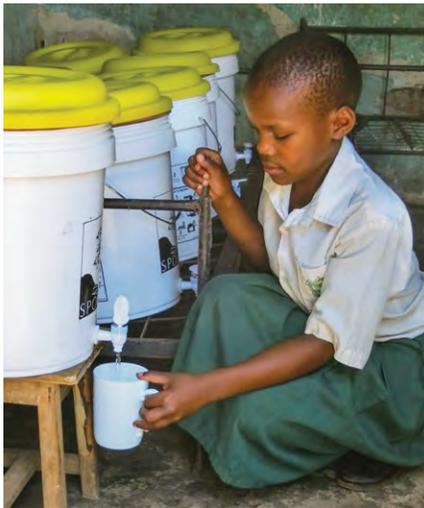
Two runner-up projects were each presented with \$25,000: [Spouts of Water](#), providing clean water using affordable

ceramic water filters in East Africa; and the [Mamirauá Institute](#), increasing the population of an endangered species of the giant arapaima fish in the Amazon.

Spouts of Water offers an alternative to boiling for clean water by installing ceramic filters inside large pots in schools, prisons, refugee camps, police and army barracks and other public spaces.

The need for clean water is particularly critical in Uganda, with roughly 25 percent of the population having little or no access to safe drinking water. Water-borne disease remains the leading cause of death for children under five in the country.

Centralized solutions for clean water



A student draws clean water from a Spouts of Water filter unit.

are often ineffective. Tap water is not safe to drink, as wells and boreholes are often contaminated. The use of ceramic water filters is a cost-effective, culturally acceptable and safe household solution.

"Spouts have created a profitable product that provides a sustainable solution to the clean water crisis," said Farthing. "They are providing clean drinking water to the people of Uganda with a scalable model that can be replicated in other parts of the region and globally."

Mamirauá Institute is helping to improve the lives of isolated riverine communities in the Amazon, where fishing is essential to their survival and household income.



LEFT TO RIGHT: Kathy Ku, Spouts of Water; Dominic Macklon, president, ConocoPhillips U.K.; Vitor Belota Gomes, Liter of Light Brazil; and Ellen Amaral, Mamirauá Institute

In the 1980s, boats began fishing deeper into the Amazon interior, and overfishing caused the decline of populations of the [giant arapaima](#), one of the most sought-after fish in the region.

"The Mamirauá Institute was created in 1999 to monitor fish stocks in the region by involving fishermen's associations and unions. They now want to create a greater awareness of their project, scale their model and expand their partnership network to other places in Brazil and other parts of South America," Farthing said.

At first, a lot of effort went in to



Fisherman lands a giant arapaima.

understanding underlying conditions, such as the species' biology and river ecology. Local fishers were encouraged to organize themselves as associations, and a community-based management model was developed for diagnosis and planning, mapping fishing areas, assessing local communities and fish population size, zoning fishing areas, limiting catch levels while stocks recovered and generating awareness of sustainable management practices.

GAINING INSPIRATION AND CREATING DIALOGUE

"The prize presents ConocoPhillips with the opportunity to recognize and reward innovative solutions that advance the quality of human life while protecting the environment — often among some of the world's most vulnerable communities," said Dominic Macklon, president, ConocoPhillips U.K. "As we work to help meet the challenge of providing secure and affordable energy to the world's growing population, while addressing the important issues of climate change, sustainability of water resources and conservation of biodiversity, we can gain great inspiration from the many fascinating submissions and winning entries, as well as from the broader constructive dialogue it generates." ■

Six companies recognized as part of Supplier Recognition Award Program

BY CHRISTINA KUHL

In April, ConocoPhillips announced the winners of its Supplier Recognition Award program. The six recipient companies were honored for exhibiting exceptional leadership that celebrates the SPIRIT Values.

Awards were given in the areas of Safety, Focus on Execution and Doing Business Better.

Business unit leadership around the world generated nominations internally, with winners chosen by a global cross-functional committee including senior management.

"These suppliers differentiated themselves either by contributing to the proactive improvement of the ConocoPhillips safety culture, demonstrating flexibility and adaptability in a changing business environment, or helping us change the way we do business by achieving fit-for-purpose solutions," said Al Hirshberg, executive vice president, Production, Drilling & Projects. "Their commitment to excellence has enabled us to safely deliver on our goals, and this program is an opportunity to show our appreciation."



Nabors Alaska Drilling | LEFT TO RIGHT: Shon Robinson, wells manager, Alaska; Nick Olds, vice president, NS Operations & Development; Joe Marushack, president, ConocoPhillips Alaska; Mike Wheattall, manager, Drilling & Wells; Dave Hebert, Nabors Alaska Drilling; Tim Green, manager, Alaska Supply Chain; and Chip Alvord, drilling manager, Alaska

SAFETY: ENSCO OFFSHORE UK LTD.

EnSCO plugged and abandoned (P&A) 18 wells on six platforms in the southern North Sea with zero lost-time or recordable incidents. They also played a significant role in reducing well P&A time from 30 days to a best case of 12.6 days.

SAFETY: NABORS ALASKA DRILLING

Nabors delivered record performance in all three rig categories (coiled tubing, workover and rotary drilling) and contributed to a record-low total recordable rate for Alaska Drilling & Wells. Their contributions resulted in a 2015 incremental production rate add of 15,667 BOPD at Kuparuk and the project being delivered under budget.

FOCUS ON EXECUTION: CB&I CONSTRUCTORS PTY LTD.

Despite several force majeure events, CB&I mitigated all cost and schedule

impacts and completed two 160,000 m3 LNG tanks for the APLNG project. They demonstrated best practice personnel management, material expediting, preservation and management and general housekeeping of their worksite, setting a great example and clear expectations for the other contractors on site. They also had two million man hours without a lost-time incident.

FOCUS ON EXECUTION: CONAM CONSTRUCTION

Conam played a critical role in enabling Alaska's DS-2S to start up two-and-a-half months ahead of schedule. They demonstrated adaptability by adjusting their work plans and ensuring the project stayed on the critical path despite weather-related delays of critical materials and modules. They completed 145,000 hours of work with a total recordable incident rate of 0.0.

CB&I Constructors Pty Ltd.

LEFT TO RIGHT: Luke Scorsone, CB&I; Cesar Canals, CB&I; Operations & Projects Services Senior Vice President Steinar Vaage; Kevin Landfried, CB&I; and Eric Frey, CB&I



Eagle Ford Reclamation Company LLC (EFRC)

LEFT TO RIGHT: Helene Harding, vice president, Gulf Coast business unit; Todd Watkins, EFRC; Mike Fowler, EFRC; and Seth Crissman, manager, Drilling & Completions

▼ **EnSCO Offshore UK Ltd.** | LEFT TO RIGHT BACK ROW: Brage Sandstad, general manager, Operated Assets; Dale Stringer, EnSCO; Gerry Cooper, U.K. well operations manager; David Hay, manager, Purchasing & Materials. LEFT TO RIGHT FRONT ROW: Dominic Macklon, president ConocoPhillips U.K.; and Julian Hall, EnSCO



DOING BUSINESS BETTER: EAGLE FORD RECLAMATION COMPANY L.L.C. (EFRC)

EFRC enabled 100 percent recycling of Eagle Ford oil-based cutting waste, resulting in significant savings per well. The close proximity of EFRC's facilities to Conoco-Phillips' operations reduced trucking distance by approximately 40 percent and removed vehicles from busy interstates and highways.

DOING BUSINESS BETTER: SCHLUMBERGER

Despite highly complex and challenging well designs in Alaska, Schlumberger had up time of almost 100 percent, an improvement in performance over the two previous years. Their real-time geosteering technologies delivered some of the highest producing wells drilled by Conoco-Phillips in 2015, with runs averaging 93 percent in zone on lateral footage drilled. ■



Conam Construction

LEFT TO RIGHT: Joe Marushack; Bill Binford, Conam Construction; Charlie Howell, Conam Construction; Scott Pessetto, manager, Capital Projects; Dale Kisee, Conam Construction; Tim Green, manager, Alaska Supply Chain; and Nick Olds, vice president, NS Operations and Development

Schlumberger

LEFT TO RIGHT: Leslie Dill, Schlumberger; Kris Givens, Schlumberger; Mike Wheatall, manager, Drilling & Wells; Tim Green, manager, Alaska Supply Chain; Nate Beck, Schlumberger; Ifeanyi Ifesie, Schlumberger; Joe Marushack; Christine Resler, Schlumberger; Babar Zulquernain, Schlumberger; and Nick Olds, vice president, NS Operations & Development



ConocoPhillips Global Water Sustainability Center team recognized for innovative research

The ConocoPhillips Global Water Sustainability Center (GWSC), based in Doha, Qatar, has been recognized by local stakeholders for its groundbreaking research in produced and process water treatment.

GWSC was one of three teams honored by the Qatar Foundation during its 2016 Annual Research Conference. The team consisted of Director Samer Adham, Principal Engineer Arne Janson and research engineers Ana Santos, Joel Minier-Matar and Altaf Hussain.

The winning entry featured GWSC's research project on osmotic concentration to reduce the volume of produced and process water sent to injection

wells at the North Field in Qatar. Results concluded that osmotic concentration can reduce produced and process water volumes from Qatari gas fields in a cost-efficient and environmentally sustainable manner. The GWSC team will now evaluate the process in the field.

Minier Matar was also awarded first place in the young professional competition sponsored in conjunction with the 9th International Petroleum Technology Conference, held in December 2015 in Doha. Minier Matar was recognized for his technical presentation on advances in application of forward osmosis technology.

"This achievement was a team effort, which I am proud of," said Minier Matar. "I look forward to more successful achievements in the future."



Joel Minier-Matar

GWSC engineers and scientists evaluate emerging technologies for treatment of produced water from oil and gas operations and desalination of seawater.

"With these awards, our industry peers have recognized the GWSC's leading edge contributions and affirmed the potential for our process to reduce the injection volumes of gas processing by-product wastewater in Qatar," said Adham. ■

Alpine exceeds expectations with 500-million-barrel milestone

BY MEREDITH KENNY

The [Colville River Unit](#), referred to as [Alpine](#), is located in the Colville River Delta on Alaska's western North Slope. After more than eight years of environmental studies, Alpine produced first oil in November 2000.

When originally developed, Alpine was estimated to recover 365 million barrels of oil, but this past February, Alpine celebrated an exciting milestone when production surpassed 500 million barrels.

Alpine was the first North Slope field developed exclusively with horizontal well technology to access more than 50 square miles of subsurface from a single drilling pad. While the original facility was planned as a 97-acre surface development, with additional satellites, the total



Members of the Alpine subsurface team, including Ryan Lance (far right) and Renee Hannon, in the Alpine workroom circa 1997

surface development now encompasses about 165 acres.

Earlier in his career, Chairman & CEO Ryan Lance was involved in the start-up of the Colville River Unit. "We knew we had pioneered something special at Alpine," he said. "The team deployed a number of advanced technologies, and

while a few were considered cutting edge, it was their combination that had never been tried before. As we prepared for the drilling and production operations, we knew Alpine would be a significant achievement for the company. Everyone who has been involved over the past two decades can take pride in having contributed to this incredible milestone."

"The Alpine development was an exciting project to be a part of and a first in several ways," said Cliff Crabtree, engineering fellow, Global Completion Engineering. "To the best of my knowledge it was the first all horizontal well development in the industry and the first to use horizontal injection

wells in a line-drive water flood. From startup, well performance was excellent; the Alpine team spent a lot of time in the first few years working out how to put more volume through that facility than it was initially designed for."

Many others who were involved in the development of Alpine had similar recollections. "ARCO began continuous development drilling at the Alpine CD1 pad in spring of 1999,"

geologist Doug Knock recalled. "In late 1999 and early 2000, ARCO sold all of its producing assets in Alaska to Phillips. We were told by a competitor that we were crazy to use open hole completions on our laterals. At the time of first Alpine oil in November 2000, we had already drilled and completed 10 to 15 laterals."



Cliff Crabtree



Doug Knock

Onshore Exploration Manager Renee Hannon remembers how her recommendation to sidetrack the appraisal well 5,000 feet to the south resulted in victory. "After serious discussions, management approved the Alpine 1B sidetrack," she said. "I remember being at the office after midnight when the wellsite geologist faxed us the logs. Alpine 1B had encountered 68 feet of net pay. We were so excited because we finally had confirmed Alpine was a large accumulation."

Drilling Manager Chip Alvord said Alpine holds a number of Alaska drilling records, including well length, unwrapped departure, horizontal lateral length and number of wells from a single drill site (78). "Doyon rig 19 moved to Alpine in February 1999 with a work scope to drill 94 horizontal wells from



Chip Alvord

two drill sites in five years," said Alvord. "It is now April 2016 and Doyon 19 has never left. Alpine continues to lead the Alaska oil industry in many different ways, and the future is bright." Principal Reservoir Engineer Scott Redman submitted two papers on Alpine startup to the Society of Petroleum Engineers in 2002, noting that "two horizontal wells were drilled and tested in 1998 to confirm horizontal well deliverability. Tests indicated strong horizontal well performance was possible." Quite possible, indeed.

In October 2015, first oil was announced at the long-anticipated CD5, an extension of the Alpine Field. CD5 is expected to meet its production target of 16,000 barrels of oil a day gross average for the year. At 500 million barrels and going strong, Alpine shows no signs of slowing down anytime soon. ■



Renee Hannon



Scott Redman

Energy meets education in Texas

BY ANDREA URBANEK

April was a busy month for energy education in the Lone Star State. From hosting teacher workshops to inspiring students to explore oil and gas careers to recognizing extraordinary math teachers, the company's efforts made an impact in schools across the state.

SPURRING INTEREST IN OIL AND GAS CAREERS

The month-long events kicked off April 1 with Spurring Energy Education Day, where 1,000 middle and high school students spent the day studying rocks through microscopes, learning about hydraulic fracturing and trying on oilfield protective clothing.

Hosted by the [South Texas Energy & Economic Roundtable](#), the event high-



Maggie McCauley, ConocoPhillips Math Teacher of the Month, interacts with students.

lighted science, technology, engineering and math, or STEM, careers. ConocoPhillips employees took an interactive approach to help students understand groundwater protection and water recycling efforts. Pete Spicer, senior environmental advisor, portrayed Dr. Drip while Jeff Murray, Eagle Ford water management lead, played the sidekick, Dr. Spurt, to explain how we safely use and protect water when producing oil and gas.

FULFILLING A NEED AMONG TEACHERS

On April 6, more than 20 teachers learned creative ways to incorporate energy into their classrooms at

a company-sponsored workshop in Kenedy, Texas. Hosted in collaboration with the [National Energy Education Development \(NEED\)](#) project, the workshop provided teachers with classroom materials that emphasize all energy forms, efficiency and conservation. Teachers received state-correlated curriculum guides and experiments to promote innovative thinking and encourage a dialogue about energy.

"The feedback from the teachers was wonderful," said Glynis Strause, Eagle Ford stakeholder relations advisor. "They were pleased with the materials and excited to share the information and activities with their students."

ConocoPhillips hosted another NEED workshop in Dumas, Texas, the following week, marking the fourth of 17 workshops planned across the country this year.

PROMOTING DIVERSITY IN STEM CAREERS

In mid-April, ConocoPhillips continued its eight-year support of the Texas Alliance for Minorities in Engineering (TAME) with an \$80,000 contribution. TAME encourages women and minority students to pursue STEM careers through innovative, hands-on science programming for K-12 students across Texas.



Math and science teachers conduct an energy experiment at the NEED workshop in Kenedy, Texas.

HONORING MATH TEACHERS

The [ConocoPhillips Math Teacher of the Month](#) program team ended the month by honoring six Houston teachers who help students excel in math. Each month of the regular baseball season, one winning teacher will be recognized during a Houston Astros home game.

"Math proficiency is key to a student's academic and career success, and we understand the critical role teachers play in students' mathematical achievement in the classroom," said Ellen DeSanctis, vice president, Investor Relations & Communications. "That's why we are pleased to honor Houston-area teachers who help inspire students to succeed both in the classroom and beyond." ■

BELOW: Teachers participate in a science activity during the NEED workshop.



On the edge of innovation

In 2015, ConocoPhillips launched the Analytics Innovation Center of Excellence (AICOE) to help advance the company's use of advanced analytics. Experts in data mining and analysis, data access and integration, statistics, optimization, machine learning and data visualization comprise the team.

"Helping the business solve problems and improve processes is our main goal," said Rich Barclay, manager, Analytics Innovation. "Data analysis and machine learning can help reveal valuable insights about our operations and business processes."

Earlier this year, the AICOE offered *The Analytics Edge*, an online course through Massachusetts Institute of Technology, delivered by edX.

More than 60 colleagues participated in the 12-week course. Offered at no cost, it features videos, lectures, working sessions and assignments. Weekly lunch gatherings around the globe foster collaboration. Customized supplementary material allows participants to use company data and apply their newly acquired knowledge to solve real business problems.

Advancing the utilization of analytics is a key component of the corporate technology strategy.

"There are a number of areas where advanced analytics can help lower costs, increase production or improve efficiency," said Chief Technology Officer Greg Leveille. "We're just beginning to scratch the surface."

"We're impressed with the interest level in this new discipline," said Chief Information Officer Mike Pfister. "Our aspiration is that advanced analytics competencies will grow throughout the company in technical and business organizations."

The AICOE hopes to offer other analytics courses in the future. For updates on course offerings, check the AI NoE or contact Trecia DeMont, NoE coordinator. ■

Colorado governor proclaims Perry Pearce Day

On April 18, 2016, Colorado Governor John W. Hickenlooper honored recent retiree Perry Pearce, formerly manager of state government affairs for the ConocoPhillips Rockies region, by proclaiming "Perry Pearce Day." Pearce was presented with the state flag that flew over the capitol building.

During his tenure in ConocoPhillips Government Affairs, Pearce has served in various capacities on the Colorado Oil & Gas Task Force, Colorado Oil & Gas Conservation Commission, Denver Metro

Chamber of Commerce, Colorado Petroleum Council, North Dakota Petroleum Council, Utah Petroleum Association, Petroleum Association of Wyoming and Colorado Petroleum Association. Throughout his career, he has earned the respect of his colleagues and peers, who have valued serving and working with him on complex and challenging law and public policy matters. ■

LEFT TO RIGHT: Federal & State Government Affairs Vice President John Dabbar; Perry's wife Bradley; Perry Pearce; and Morgan McCammon, legislative assistant, Rockies Government Affairs



Sandra Villegas recognized for contributions to field of project controls

Sandra Mejia Villegas, cost analyst, ConocoPhillips Canada, was recently



Sandra Villegas

recognized by the Association for the Advancement of Cost Engineering (AACE) International with its 2016 Outstanding Young Professionals Award.

"Through her professional and technical expertise, Sandra has built strong relationships with multiple stakeholders at different levels of the

organization," said Moheb Aziz, project controls manager, Cost Estimating/BMP/EXP. "Her passion for the project controls field is evident in her hard work, dedication and incessant pursuit of continuous improvement. Young professionals like Sandra are vital to the future of ConocoPhillips. Their contributions are not only the stepping stones in their career paths, but they also help chart the road for the sustainable growth of the company."

The AACE International award was established in 2011 to honor the younger generation of professionals in the cost and management field who have made a significant contribution to the profession. ■

A challenge of epic proportions

ELIZABETH LOPEZ, SENIOR ADMINISTRATIVE ASSISTANT, CAPITAL PROJECTS, ALASKA WAS IN THE MARKET FOR A PERSONAL CHALLENGE.

"On social media I saw the Great Wall marathon. I'd never been to China and I had never really run. But I'd always wanted to see the Great Wall."

So she set her sights on the challenging 26.2-mile run, starting with a visit to her doctor. "She runs marathons and told me it takes six months to prepare for one. I had 7 weeks." A physical therapist got her started with a plan that included long runs, yoga, other cardio and proper nutrition.

"My work family got me inspired to do it," said Lopez. An added boost was having gear signed for good luck by all members of the company's executive leadership team, family and special friends.

On Saturday, May 21, she completed the Great Wall Marathon in just under eight hours. The event follows China's 2,200-year-old landmark, including 5,164



ABOVE: With high energy, hope and enthusiasm, Lopez begins the final steep climb on her way to the finish line.

steps on the wall itself with a vertical gain of 3,100 feet.

"I had to be at the tower located at the 22-mile mark by 2 p.m. I made it at 1:59."

One of her colleagues asked if she crawled. "I did going up. It was also difficult descending, so I ended up going down backwards. People looked at me, decided that worked and then did the same thing."



ABOVE: At the finish line, Lopez is overwhelmed with emotion.

Nearing the finish line, the route went downhill. "My feet were burning, but I remembered my physical therapist saying downhill is a gift for any runner, so I focused on that. I finished 75 seconds before they closed the race. Every second I wondered if I would make it, and I did."

So what's the next physical challenge for Lopez? "I'm eying the Petra marathon (in Jordan) and hiking Mt. Kilimanjaro." ■

LEFT: Lopez takes a well-deserved breather after passing 22 miles and climbing the wall for the second time around.



spirit

On Assignment

SUZANNE SCHULTE (*Unlocking Australia's LNG potential, Page 10*) joined ConocoPhillips in 2011 for the Australia Pacific LNG project. Initially based in Gladstone to support stakeholder and community engagement, she transitioned into the Australia East business unit in September 2015, relocating to Brisbane. In her current role she is responsible for stakeholder engagement, corporate and media communications and supporting employee communications. Suzanne graduated from Queensland University of Technology with a Bachelor of Business and has worked in similar roles in the energy and resource sector for nearly 10 years. She is currently completing her Master of Sustainable Practices through RMIT University. When she gets spare time, she loves to cook, read and travel.



FIONA MCLEOD (*Unlocking Australia's LNG potential, Page 10*) joined ConocoPhillips seven years ago, soon after Australia Pacific LNG was formed. She is currently a secondee into APLNG, managing external affairs for the joint venture. Her work includes media, communication, stakeholder engagement, community investment and government relations. She is a graduate of the Queensland University of Technology and is currently undertaking postgraduate studies at Harvard Extension School.

AUDRA MULCAHY (*Unlocking Australia's LNG potential, Page 10*) joined ConocoPhillips in 2012 as executive administrative coordinator, supporting the Australia East business unit leadership team. She was the ninth employee to join the new business unit. In 2014, Audra transitioned into her current role as external affairs advisor and is responsible for community investment, employee communication and brand management. Audra has enjoyed developing the newly created role and the opportunity to grow the community investment program. With more than 15 years of experience in the financial services sector, Audra brings strong project planning, stakeholder coordination and implementation skills to her current role. Enjoying the outdoors and making the most of the beautiful Queensland weather, she loves spending her spare time at the beach, in the park or out in the garden.



KIKY SHAHAB (*Living and working in Jakarta, Page 26*) joined ConocoPhillips nine years ago as a business apprentice and has worked primarily in developing internal communications and publications for the Indonesia business unit, through both print and digital media. She is also involved in developing employee volunteer programs for environmental causes. She loves to write, on and off the job. In her spare time, Kiky enjoys traveling and reading romance novels.

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LET'S TALK SAFETY: 8 rules to *live* by!

Tim Bussart, Harvey Construction Superintendent
Energy Center 3 Project, Houston, Texas

"As we built out a new home for ConocoPhillips Lower 48, we embraced the Life Saving Rules to help us do our work in the right way. ConocoPhillips and Harvey Construction have enjoyed a great partnership and, because our workers adopted the Life Saving Rules, we compiled an unmatched safety record."

Tim Bussart, left, and
Jon Baccus, ConocoPhillips
Real Estate & Facilities
Services Operations Manager

Life Saving Rules



On operations around the world, contract employees are adopting the ConocoPhillips Life Saving Rules as the way we work. The rules are designed to reduce risk during critical activities. They provide an extra measure of protection and underscore the priority ConocoPhillips places on safety in our global operations.

It's not just what we do. It's how we do it.





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Unlocking Australia's LNG Potential