UNLOCKING ENERGY IN ULTRA-DEEPWATER
3D printing saves months of work.

SHELL MAKES HISTORY ON NEW YORK STOCK EXCHANGE
Shell Midstream Partners goes public.

SHELL IN THE ARCTIC
Answers to commonly asked questions.

WIN AT DAYTONA
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A WORD FROM OUR EDITORS

We know that many of you as former Shell employees field questions from time to time on Shell projects and the direction of the industry. While our goal is to provide you with news about the business, some alumni expressed a need for messaging documents that would help explain Shell’s stance on particular hot-button issues. This issue, we’ve sought to answer commonly asked questions about our role in the Arctic. We hope this information will prove helpful when discussing the project with friends and family.

Also in this issue, we’ve shared a major success at the Daytona 500—a big win for driver Joey Logano and for Shell as sponsor—how Shell made history on the New York Stock Exchange and news on the building of the “rational middle.”

In addition to finding regional news on pages 7-10, we hope you’ll read how alumni are staying healthy in retirement in our new Noteworthy! section of the magazine. Make sure to send your responses and photos to this issue’s question - What do you like to do when the temperatures cool off in the fall?

And, don’t forget to send us your story ideas for the Alumni Features section of the magazine. Our contact details can be found at the bottom of this page.

We hope you have a cool, relaxing summer!

Natalie Mazey and Jackie Panera
Editors, AlumniNews magazine

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STORY IDEAS WELCOME!

AlumniNews magazine is looking for recent story ideas for our Alumni Features section! In this part of the magazine, we highlight alumni who are staying active and making a difference in retirement. If you know of someone who would make a great profile for the magazine, please send us his/her phone number and email address, along with a brief description of the story idea. To submit story ideas for the U.S., email ShellUSAlumni@shell.com or mail a letter to Shell Oil Company Communications – Natalie Mazey, P.O. Box 2463, Houston, Texas 77252-2463. To submit story ideas for Canada, email PublicAffairs-Canada@shell.com or mail a letter to Jackie Panera, Shell Canada Limited, 400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada.
After a strong 2014 season, Joey Logano, driver of the No. 22 Shell-Pennzoil Ford Fusion, kicked off 2015 with his first-ever Daytona 500 victory. With Shell technology under the hood, the win at the Daytona International Speedway is the first 2015 points race victory for the Shell-Pennzoil team.

“That feeling of winning the Daytona 500, I can’t explain how cool this is,” Logano says. “I said in an interview that this was our worst racetrack last year. We worked really hard to figure out how we could get better at it, and all the hard work got us the win.”

“We are honored to be part of the winning tradition with Team Penske and couldn’t be more thrilled that our lubricants technology helped Joey take home his first win of 2015,” says Colin Abraham, vice president of Lubricants Americas & Downstream LNG. Throughout the season, Shell and Pennzoil scientists work closely with Team Penske to develop bespoke racing oil formulations to help maximize performance and engine reliability. “But, what’s even more exciting is that our work at the track and the knowledge we gain is used to develop the next generation of high-quality products for our customers.”

Shell and Pennzoil scientists, with the help of Team Penske, use the extreme test bed of the NASCAR track to optimize the special formulation of Pennzoil racing oil that Logano uses in the No. 22 Pennzoil Platinum Ford Fusion. The Pennzoil race oil in the No. 22 car is formulated using PurePlus Technology, a unique process that converts pure natural gas into a first-of-its-kind, high-quality full synthetic base oil. This pure, clear PurePlus base oil has fewer of the impurities found in crude oil, allowing it to fully enhance the benefits of the additives in Pennzoil Platinum and Pennzoil Ultra Platinum Full Synthetic motor oils. In addition to blending a unique formulation for the Ford engine from week to week, Shell and Pennzoil scientists also tailor high-performance lubricants for the Team Penske gearbox.

“The relationship that Team Penske has with Shell and Pennzoil goes beyond a sponsorship. With their world-class knowledge and technical leadership, we are able to customize the racing motor oil which helps us to optimize performance, efficiency and engine reliability, giving us an edge on race day. We know that our work with Shell and Pennzoil scientists to develop racing motor oils gives us a unique advantage at the track and was a part of the win for Logano at the Daytona 500,” says Travis Geisler, director of Competition at Team Penske. 

More information
For more information about the Shell-Pennzoil sponsorship, visit www.shell.us/racing.


For more information about Team Penske, visit www.penskeracing.com.
HOW A DISCONNECTABLE BUOY WORKS

In the event of storms or hurricanes that occur in the Gulf of Mexico during the yearly storm season, the FPSO will be able to disconnect the buoy with the mooring lines, risers and umbilicals, sail to safe areas, and then return after storms have passed in order to reconnect with the buoy and return to operations.

Three-dimensional (3D) printers promise a world where you can quickly make any object you want, just by hitting a “print” button. For the average consumer, that world may be some years off. But for Shell, that day is here.

Shell’s team at its Stones asset in the ultra-deepwater Gulf of Mexico saved months of work and prevented potential delays through the use of 3D printing and support from the company’s Innovation team in Technical and Competitive IT (TaCIT).

How it came about

The Stones project represents a series of firsts for Shell, however, innovation always comes with challenges. The floating, production, storage and offloading (FPSO) vessel features an in-line mooring connector (ILMC), which provides mooring tension adjustability and is a key component of the FPSO’s disconnectable capabilities.

Since the ILMC is a new technology in the Gulf of Mexico, the U.S. Bureau of Safety and Environmental Enforcement wanted to see a working model before granting approval for its use.

Under normal circumstances, building an accurate, working demonstration model that represents such an intricate, multi-component technology would take months—potentially setting back the project.

To reduce the time needed for a scale model, Capital Projects Information Management/Information Technology (IM/IT) used 3D printing. The team printed all of the components in the ILMC and also separately for the disconnectable buoy. This approach allowed them to test the design, identify the sequence in which the massive blocks that make up the disconnectable buoy should be put together and meet the regulatory requirements for the ILMC.

“With 3D printing technology, it took just four weeks to print the ILMC,” says Glenn Ruppert, planning integration manager for Stones. “We have learned the value of having a working model built on sound manufacturing techniques that engineering, design and construction can follow and apply in the field.”
“Shell and SBM Offshore, a leading FPSO contractor, are working together to safely deliver the groundbreaking Turritella FPSO. The use of 3D printing technology on Stones will improve the project’s safety and delivery performance while providing an example for other projects, both in Shell and the industry,” adds Curtis Lohr, Stones project manager.

**Detecting design flaws earlier**
The use of 3D printing was not only instrumental in demonstrating the new technology to regulators, but it has also helped advance decision-making at critical points of project execution. While preparing the disconnectable buoy model for 3D printing using design details provided by FPSO contractor SBM Offshore, the team identified defects that are typically revealed at later phases of a project.

“For the buoy section, we discovered several design flaws, misinterpretations of installation sequencing, and drawing naming and call-out inconsistencies that would have adversely affected the installation schedule,” says Carl Webb, Stones turret mooring and installation lead engineer.

Identifying these issues early on meant that the dimensions and angles of the foam blocks could be corrected well before they went into full size manufacture, saving time and money. “This is a great example of using IT innovatively to support safe, cost-effective and timely project delivery,” says Imran Khan, Stones information management lead. “We all worked together to achieve the same goal, and IM/IT understood the challenges the team faced and came up with the right solution.”

“A strong, integrated team involving IM/IT, Shell project leads and the contractor’s engineering team was able to work with the Shell deepwater community to use 3D printing technology to ensure early on in the project that we had the right design and construction approach. This is how we get it right the first time,” says Harry de Grijs, vice president, Capital Projects IMIT. «

**STONES: NEW FRONTIER IN DEEPWATER**

Shell announced final investment decision for Stones in May 2013. This set in motion the construction and fabrication of the host FPSO vessel and subsea infrastructure. Subsea production wells will tie to the FPSO vessel, the deepest production facility in the world at approximately 9,500 feet (2,900 meters) of water.
It’s been just over two years since the Rational Middle Energy Series (RMES) was first launched publicly at the Aspen Ideas Festival. Since then, the series has been steadily building momentum and is now being used in schools, community meetings and policy meetings across the world, including a recent screening and panel discussion at the National Conference for the World Affairs Councils of America in Washington, D.C. From Houston to Guatemala City, Sussex to Calgary, RMES episodes have become a powerful starting point for a balanced conversation about today’s energy issues.

The free, online documentary (available at www.rationalmiddle.com and on YouTube) is inspired by the belief that a rational movement, focused on civil dialogue, can lead to a cleaner energy future. Sponsored by Shell and independently directed and produced by Gregory Kallenberg, the series includes 22 episodes that cover everything from the future of renewables, to shale gas development, to how a sustainable beer is made.

The idea for the series came about when Kallenberg was filming the acclaimed energy documentary, Haynesville: A Nation’s Hunt for an Energy Future. While working in Haynesville, Kallenberg realized that while the topic of energy can be incredibly polarizing, there is a significant portion of the population who are “in the middle” on the issue and are looking for fact-based information to make informed decisions.

“We’d been trying to fund the idea of this series for about a year and a half before meeting Shell and pitching the concept. Not only did Shell believe this was an important conversation to have, they were also brave enough to give us artistic and intellectual control of the series from start to finish,” Kallenberg says.

It’s about a conversation

The Rational Middle isn’t about providing passive information related to energy challenges. It’s about a conversation. It’s about getting concerned citizens, industry and policy-makers together at one table, listening to one another and addressing our energy issues. The RMES is the starting point to a conversation that must continue long after the credits roll.

“At Shell, we’ve always known that it’s going to take a whole new level of collaboration and leadership to develop workable policies and solutions to meet the energy challenge,” says Fred Palmer, Upstream Americas Unconventionals business communications manager. “Rational Middle is an avenue to help drive that conversation, by exploring some of the most challenging energy issues through the power of film.”

Have you joined the movement?

Kallenberg says that it doesn’t matter if you’re an oil expert, pro-wind, anti-coal or lover of geothermal. “The fact is we’ve got to start working on this energy future together and now. We’ve all got a voice in this and we need to collaborate to evolve this energy future. We need to meet in the Rational Middle, sit down at this table, look each other in the eye and listen,” he says. “Together, we will decide where we are as an energy nation, where we want to go and most importantly, how we intend to get there in a rational, sensible and sustainable way.”

To learn more or to watch episodes of the RMES, visit www.rationalmiddle.com. 

SUCCESS IN THE NUMBERS

Since its launch, the Rational Middle Energy Series has received:

- More than 2 million views on YouTube
- More than 9 million minutes watched
- More than 250,000 views of “Realities of Drilling”
- More than 120,000 views of “Canada Energy 101”
- 39,000 Facebook “Likes”
- Highest viewer retention and completion in the Education and Energy categories on YouTube

BUILDING MOMENTUM

The road to the Rational Middle is rising

The Rational Middle discusses ways to achieve a cleaner energy future.

FINDING ENERGY’S RATIONAL MIDDLE

Shell and the RMES are hitting the road this year, targeting eight strategic local markets across the U.S. in the first half of the year through a partnership with the World Affairs Councils of America.

In April, hundreds of students from high schools and universities from Canada, the U.S. and Latin America got the chance to “find energy’s rational middle” at the Shell Eco-marathon Americas event in Detroit. With previous screenings at Duke University, the University of Texas, Mount Royal University, Texas A&M, Cal Poly and more, the one aspect that remains constant is the popularity and resonance of the series among students.
Shell had an opportunity to engage with its oil sands suppliers recently at the Oil Sands Supplier Summit in Calgary. Executives from 45 of its top suppliers attended the event, which focused largely on cost and capital. “The purpose of the Supplier Summit is to engage with suppliers early in the year and align on our priorities,” says Kerry Margetts, general manager of Contracts & Procurement. For 2015, we need to continue to drive for Goal Zero in safety and meet our production targets, with this year focusing on significantly lower cost structures. The low oil price environment has created new opportunities for both Shell and our suppliers.”

Presentations by Zoe Yujnovich, vice president, Oil Sands Joint Venture; Peter Zebedee, general manager, Shell Albian Sands; and Michael Frigge, general manager, Scotford Upgrader, provided business- and site-level perspectives on Heavy Oil’s 2015 priorities and expectations. “If there was ever an urgent call to action, it is now and the action is to deliver 2015 performance by making structural changes to the way we do business and to sustain those changes into the future,” says Yujnovich, who pointed out that such changes are necessary regardless of low oil prices. “We have a clear path ahead to permanently lower our cost structure so that when the oil price returns, we will be a stronger business than before.”

Rotating through three workshops focused on safety, ways of working/market access and productivity, supplier representatives had the opportunity to engage in an open two-way dialogue and work through key issues in the oil sands business. Shell also recognized vendors who made significant achievements in safety and value improvements during 2014. Clean Harbors was commended for 665 days at Goal Zero and for implementing a simple approach to tracking workforce productivity with the use of iPads and a short survey after each shift. Chemco received an award for exceptional safety performance, with its longest Goal Zero run at 1,291 days and 286 days without a first-aid incident. The company was also recognized for a 12% reduction in costs.

“‘This is a best practice in my opinion. It drives accountability and a sense of camaraderie, solidifying Shell as the leading oil sands producer.’

‘I left feeling a part of a bigger picture. There were ‘aha’ moments, and I felt both challenged and focused upon leaving.’

‘It is obvious that AOSP needs to lower costs and deliver improved performance. I found the meeting clearly showed that Shell/AOSP are looking for partners to achieve this and it is for the better of all companies.’”

What vendors had to say about the summit

What do you like to do when the temperatures cool off in the fall?

“At the end of the day, we want our suppliers to also be our strategic business partners,” Yujnovich says. “The Supplier Summit allows us to foster these relationships and provides the active collaboration needed for us all to drive forward to ensure an economically sustainable oil sands business in the future.”
REDUCING PAPER USAGE
Employee initiative saves Shell $180,000 a year

Have you ever thought your gas station receipt is too long? Keith Edwards did, and he’s doing something about it.

In response to a cost-cutting initiative, the technology coordinator for Retail modeled the group’s receipt paper usage, determining that every single-height line of text printed amounted to $12,000 a year in paper costs.

“Having this clear understanding of cost, I was able to present some options for layout optimization to my supervisor, who was very supportive of my efforts,” Edwards explains. “There are some elements of our receipt layout that are required for Brand & Communications or Legal/Fiscal/Tax reasons, but I was able to consult and gain support for my proposed changes with colleagues in those teams as they understood the benefits of the changes.”

Edwards reduced the standard length of a receipt by changing all double-height printing to single-height printing. This measure saved six lines per receipt while retaining the same content for the customer. Further adjustments to layout and formatting of the header, tax and footer sections saved another five lines on every receipt printed. Finally, Edwards and his team adjusted the messaging for the customer feedback survey to save another four lines. In addition, they took the opportunity to move the wash codes for customers who purchase a car wash to the bottom of the receipt so it can be more easily presented to the customer.

In total, the team achieved a savings of 15 lines per receipt, equating to approximately two inches in length. At 2013 consumption rates, Edwards estimates this will achieve a cost savings of approximately $180,000 a year. In addition, Shell retailers will benefit from less frequent roll changes and reorders, and customers will appreciate the environmental benefits of shorter receipts.

“We all have an obligation to consider what we can do to eliminate waste and unnecessary practices in the way of growing our business,” Edwards says. «

SUPPORTING WOMEN IN INDUSTRY
Shell speaks at Women Building Futures event

Shell is showing its support for a diverse work environment. The company was recently on hand in Edmonton for an announcement of $1 million in federal funding to Women Building Futures (WBF), which provides skilled labor training to women in the construction industry.

Anita Spence, Quest project manager, represented Shell at the event. Since 2008, Shell has contributed $400,000 to WBF. “When I started my career, I was the first female engineer to work at the plant I was at, so it’s clear there has been progress made,” Spence says. “But there are still areas of the workforce where women are under-represented. That’s why the work WBF is doing is so critically important.”

The funding will support the WBF #4ME project, which uses a technology-based system to increase the WBF’s capacity to attract, train and retain women in skilled trades. Over the next three years, the #4ME Program will provide up to 24,000 women with training, as well as place over 900 graduates in jobs by the end of 2017. «
FOCUSBING ON EXISTING OIL SANDS OPERATIONS

Shell Canada withdraws regulatory application for Pierre River Mine

Shell announced it is withdrawing its regulatory application for the proposed Pierre River Mine (PRM) north of Fort McMurray, Alberta, to focus attention on its existing oil sands operations.

“The Pierre River Mine remains a very long-term opportunity for us, but it is not currently a priority,” says Lorraine Mitchelmore, Shell Canada president and executive vice president of Heavy Oil. “Our current focus is on making our heavy oil business as economically and environmentally competitive as possible. We will continue to hold the leases and can reapply in the future when the time is right.”

Shell has existing regulatory approval and scope to potentially more than double its oil sands production from its current level of 255,000 barrels per day. Given the preliminary nature of the PRM project, employment impacts will be very limited. «

SHELL DIESEL EXTRA ... WITHOUT THE EXTRA COST

Employee reduces agency costs

Recently, Ryan Hartung, Commercial Fuels marketing executive, looked at the amount he was spending on an external advertising agency and realized the costs were extraordinarily high.

“When it comes to spending, I try to view Shell’s money as if it were my own,” Hartung says. He took it upon himself to complete the materials needed for the project, saving nearly $6,000. “For the piece of work I had already agreed to (verbally, prior to signing), the quote was $13,000. I asked them to walk me through the cost breakdown and how the costs add up to that amount. After realizing it was difficult for them to specify line by line what we were paying for, I asked if we could re-evaluate the quote and find a way to do it more affordably. A five-minute conversation dropped the quote to $8,900, which makes me wonder how much money could be saved if these conversations were held more often.”

By asking the right questions and taking on work that he knows he can manage himself, Hartung expects to save an additional $10,000 on each of his two additional projects—for a total cost savings of $20,000.

“I think we need to operate like a big business, but spend like a little one. Many small companies scrutinize costs that large companies often feel they can afford to ignore,” he says. “This is especially important in Commercial Fuels where our margins are so thin. Every thousand dollars saved translates into massive volumes of Shell Diesel Extra sales. With that type of mindset, every thousand dollars saved begins to seem a lot more significant.” «

HERE’S TO 34 YEARS!

In 1981, Daryl Van Hereweghe, manager of Property Tax, remembers seeing a position for Shell Canada posted in the Edmonton Journal for the Tax and Insurance, Finance and Administration Department. Little did he know, this job posting would change his life for the next 34 years.

Van Hereweghe, who retires this year, began as a property tax analyst covering refineries and oil and gas facilities within Alberta. He worked his way up to being responsible for all of Shell’s properties in Eastern Canada and manager of the Canadian Property Tax. Today, he works solely for the Property Tax Group.

“Over the years, I have developed many good relationships and built a strong network of professionals in the Property Tax industry across Canada,” he says. “This has been an important key to the success I have enjoyed in my career. I will miss my colleagues at Shell, as well as the people I have worked with throughout my career. I have made many lifelong friends and will continue to maintain those friendships.”

He says that he has experienced continuous learning watching Shell progress from a Canadian-specific company to a global integrated energy company, which he has been proud to be a part of.

When he retires this July, Van Hereweghe plans to spend time with family, including his new granddaughter, as well as travelling and enjoying time at his lake property. “I will also have more time to tinker with my antique cars,” he adds. «
USEFUL INFORMATION

Shell Benefits Centre
To view your coverage, find information about plans and make changes when appropriate, contact the Shell Benefits Centre:
- Toll-free at 1-877-550-3539 (1-416-390-2633 if outside Canada and the U.S.) from 6 a.m. to 6 p.m. Mountain Time any business day, or
- Go to www.mybenefitscentre.com/Shell and use the message centre.

User ID: Last six digits of your Shell People Personnel Number

In the event of the death of a retiree, spouse of a retiree or dependent, contact the Shell Benefits Centre. The Shell Benefits Centre will help initiate any applicable insurance claim process and will also help manage the necessary changes to your benefits and pension.

Health and Dental
Sun Life Financial administers health and dental benefits. For assistance with health and dental claims and coverage information, contact the Sun Life Financial Customer Care Centre:
- Toll-free at 1-866-203-4526 (1-800-9876-5470 if outside Canada) from 6 a.m. to 6 p.m. Mountain Time any business day, or
- Go to www.mysunlife.ca to visit the Sun Life Financial Member Services website and select Secure messages.

Emergency Travel Assistance
For emergency travel assistance, contact Europ Assistance USA Inc. (Europ Assistance):
- Toll-free at 1-800-511-4610 in Canada and the U.S.
- Collect at 1-202-296-7493 from outside the U.S.
- From Cuba by calling 66-12-12 for an international operator. Ask for 1-202-296-7493 (collect call). In Cuba, toll-free dialing or calls from public phones are not available.

Life Insurance
Desjardins Financial Security (Desjardins) underwrites the Retiree Life Insurance plan under Policy 530011.
To view your life insurance coverage, find and link to information about the plan and make beneficiary changes, contact the Shell Benefits Centre:
- Go to www.mybenefitscentre.com/Shell.
- Select myBenefits.

HR Service Desk Americas
For pension payments, T4, T4A, income tax and all other questions, contact the HR Service Desk Americas:
- Toll-free at 1-800-663-9898 in Canada and the U.S.
- Collect at 1-403-691-2900 if outside Canada,
- Email shloil-hr-service-desk-americas@shell.com.
It was another busy day of trading on the New York Stock Exchange (NYSE), considered the largest stock exchange in the world. Standing on a podium high above the traders, Shell Midstream Partners CEO Peggy Montana was ready to make history.

When the clock struck 4 p.m., Montana rang the closing bell—marking the successful launch of Shell Midstream Partners. “This was a chance to recognize some hard work by our team and to shine the financial spotlight on Shell’s groundbreaking achievement,” Montana says.

Shell Midstream Partners marks the first time that a major, integrated oil company has spun off midstream assets into a publicly traded partnership. The closing bell was met with cheers and high-fives and was a moment to celebrate for everyone gathered on that podium.

Shell Midstream Partners goes public

An MLP is a limited partnership that is publicly traded on a securities exchange (such as the NYSE). It combines the tax benefits of a limited partnership with the liquidity of publicly traded securities. The MLP structure is part of Shell’s strategy to improve capital efficiency. That includes making sure the company targets investments in the highest-returning growth projects and getting the best value from its existing portfolio.

The initial public offering (IPO) of Shell Midstream Partners in October 2014 received positive media attention. Bloomberg News noted it as “the best U.S. trading debut performance by an energy company this year.”

“The launch was the biggest MLP IPO offering at its inception,” Montana notes. “The strength of the Shell brand and our midstream assets made this an attractive offer for many investors.”

The chance to ring the closing bell at the NYSE is also a unique opportunity to gain notice in the financial world. In addition to the television viewers who tuned in across the U.S. to watch the event, Shell’s official tweet, complete with photograph of the bell ringing, reached approximately 1 million people.

Sharing success

Alongside Shell leaders was James Buckheit, a call center analyst for U.S. Pipelines. Buckheit was one of three Pipeline employees who attended after winning a drawing hosted by Shell leadership. As the grand prize winner, Buckheit earned a spot on the bell-ringing stage with the leadership team.

“You represent all the people of U.S. Pipelines who keep us running,” Montana told the three winners that day. “Your work laid the foundation that made the MLP possible.”

For Buckheit, the sense of history was matched by his sense of pride. “I was looking back at my 25 years with Shell Pipeline Company. I can’t think of too many bad days on the job, because we’ve always been as much of a family as a business. And this day, well, it was just about at the top,” he says."
SHELL IN THE ARCTIC
Answers to commonly asked questions

Recently, Greenpeace members staged anti-Arctic demonstrations at a number of Shell-branded outlets across several states, and the White House proposed new and higher protection levels for Alaska’s Arctic National Wildlife Refuge. Major media outlets also have been publishing investigative stories on Shell’s past efforts in the state. Such activities are expected to continue and, in fact, increase as we near a possible drilling season in Alaska this year. They will also generate publicity on traditional and social media channels, and may prompt questions from friends and family members. We hope the information below will help you answer some of those questions.

WHY EXPLORE THE ARCTIC?
The Arctic is a region of great opportunity. It has the potential to ease the world’s growing need for energy, which could double from its 2000 level by 2050. The U.S. Geological Survey estimates the Arctic holds around 30% of the world’s undiscovered natural gas and 13% of its yet-to-find oil, most of which are believed to lie offshore.

While views differ on whether to develop the area, Arctic countries, including Canada, Greenland, Norway, Russia and the U.S., have decided to proceed with oil and gas exploration programs to achieve energy security and spark economic development opportunities for their populations. They are inviting oil and gas companies like Shell to help them explore for new hydrocarbon resources.

Shell is assessing early stage exploration opportunities in Alaska (our key priority in the near future), Greenland, Norway and Russia. We only go to the Arctic with great care and remain committed to establishing an Arctic exploration program that provides confidence to stakeholders and regulators, and meets the high standards Shell applies to its operations around the world. We must do it in a way that protects vital ecosystems, respects the way of life of indigenous populations, keeps people safe and encourages high standards of performance for every operator in our industry.

HOW DOES ARCTIC EXPLORATION IMPACT CLIMATE CHANGE?
Climate change remains a key issue for Shell. We accept the science that climate change is real and happening, and those impacts are felt in the Arctic. And while the impact of climate change can result in melting sea ice, rising sea levels, increased extreme weather events and changes in weather patterns, the underlying cause is temperature change driven by rising carbon dioxide (CO₂) levels in the atmosphere—not the safe and responsible development of Arctic resources.

SHOULD ARCTIC EXPLORATION CONTINUE IN A LOW OIL PRICE ENVIRONMENT?
Shell uses a long-term oil price formula to test the economic viability of new projects and future opportunities such as the Arctic. Shell has many decades of experience in estimating costs in frontier locations, and scrutinizes our plans to ensure they are sufficiently attractive and resilient for the longer term.

WHAT IS OUR SPECIFIC PLAN FOR ALASKA?
We have made no formal decision, but are undertaking activities to preserve the option of a 2015 season. Any final decision to go forward will depend on successful permitting, clearing any legal obstacles and our own assessment that we are prepared to explore safely and successfully. This is a multi-year program, and every step we take will be contingent on meeting all the conditions necessary to proceed safely and responsibly. Unfortunately, every year we are delayed from understanding the oil and gas resources under the Chukchi Sea only further delays the potential creation of tens of thousands of jobs, billions of dollars in tax revenue and much-needed new oil for the Trans-Alaska Pipeline.
The U.S. and Canada are emerging as leaders in carbon capture and storage (CCS) technology. Alberta Premier Jim Prentice met with officials from the U.S. Department of Energy (DOE) and Shell in Washington, D.C. to learn more about their proposed research collaboration on CCS monitoring technologies.

The Shell Quest team and technology developers, funded by the DOE and managed by the DOE’s National Technology Laboratory, have been discussing opportunities to field test monitoring technologies at the Quest carbon dioxide (CO2) underground storage site. The DOE-funded technologies would be tested alongside the comprehensive monitoring program that Shell has already put in place for the Quest project.

Prentice highlighted the collaboration that can exist between Canada and the U.S. to advance technologies that are important to reduce CO2 emissions. “As an energy-producing province, it’s important that we be innovative and explore new ways to reduce our impact on the environment. I’m pleased that experts in Alberta are working with the U.S. Department of Energy and Shell to encourage global emissions reduction through new technologies. This work highlights the collaborative nature of Alberta’s CCS development program.”

HOW PREPARED ARE WE TO DEAL WITH AN OIL SPILL THERE?
In the unlikely event of a spill, Shell can mount an effective response within 60 minutes, 24 hours a day—government regulators demand this level of response before a permit to drill is issued. We have built an industry-leading capability in preventing spills and in our readiness to respond to any that occur. We regularly test our plans and preparedness, and take part in large-scale joint exercises with other industry partners, government agencies, scientists and oil spill experts. Our oil spill prevention capability includes multiple redundancies: if any system or device fails, a backup system or device immediately takes over to prevent a well blowout. We have a robust response program consisting of a dedicated onsite fleet, near-shore barges and response vessels and onshore response teams. And, in the event of a worst-case scenario, we have developed technologies that can track and remove spilled oil from solid and broken ice.

HOW MUCH DO WE KNOW ABOUT THE ARCTIC?
We have spent more than $100 million on scientific research in the Arctic—mainly in Alaska—since 2006. This body of science (our studies combined with other independent peer-reviewed research) has established an understanding of Arctic systems, how they operate, and how they respond to oil and gas operations—an understanding that functions both within Alaska and in other parts of the Arctic. This science provides a solid basis for decision-makers to advance exploration and development in the Arctic. Results have increased our understanding of marine mammal distribution, behavior and habitat use.

WHAT IS OUR VIEW TOWARD ANTI-ARCTIC PROTESTS AT SHELL LOCATIONS?
We respect the right of individuals and organizations to engage in a free and frank exchange of views about meeting the world’s growing energy needs. Recognizing the right of individuals to express their point of view, we only ask that they do so in a manner that is lawful and does not place their safety or the safety of others at risk. 

A UNIFIED APPROACH ON CCS
Alberta premier meets with Shell, Department of Energy

The U.S. and Canada are emerging as leaders in carbon capture and storage (CCS) technology. Alberta Premier Jim Prentice met with officials from the U.S. Department of Energy (DOE) and Shell in Washington, D.C. to learn more about their proposed research collaboration on CCS monitoring technologies.

The Shell Quest team and technology developers, funded by the DOE and managed by the DOE’s National Technology Laboratory, have been discussing opportunities to field test monitoring technologies at the Quest carbon dioxide (CO2) underground storage site. The DOE-funded technologies would be tested alongside the comprehensive monitoring program that Shell has already put in place for the Quest project.

Prentice highlighted the collaboration that can exist between Canada and the U.S. to advance technologies that are important to reduce CO2 emissions. “As an energy-producing province, it’s important that we be innovative and explore new ways to reduce our impact on the environment. I’m pleased that experts in Alberta are working with the U.S. Department of Energy and Shell to encourage global emissions reduction through new technologies. This work highlights the collaborative nature of Alberta’s CCS development program.”
The Art of a Blacksmith
Forging a new legacy

When Marlan Downey (’87 Pecten International) first began his work as a blacksmith 30 years ago, he found it was the perfect stress reliever. “I had a 200-pound anvil, a hot piece of steel and a three-pound sledgehammer. I would talk to the steel and anvil about the week’s stresses. By the end of the weekend, I was calm, nice Marlan Downey again,” he says. “I sure beat the hell out of a lot of iron up there.”

Downey has two forges—one at his ranch 50 miles north of Dallas and the other at his cottage in Cornwall, England, where he serves as a blacksmith for the local fishing village three months out of the year. While a forge may seem a strange addition to the home for most, Downey grew up around a forge. “My grandfather was one of the last old-fashioned blacksmiths. He homesteaded in Nebraska in the 1880s, serving as justice of the peace and a farrier blacksmith for the city of Salem.” Downey spent his early years sweeping up around his grandfather’s shop, watching him shoe horses and the town folk play cards around a pot-bellied stove. His father worked on the second floor of the shop as a cabinet-maker. Downey would pick up woodworking as a hobby later on in life as well.

While he may have started blacksmithing as a way to relieve stress, Downey finds it a novel way to create unique gifts for friends and family. “I design something that’s one of a kind.” For former Shell Executive Vice President Charlie Blackburn, Downey created a knife to commemorate two successes they shared in Cameroon and Syria. “I crafted the knife handle from Cameroon elephant ivory (before it was illegal) and used Damascus steel for the blade.”

For family friend Herbert Hunt, patriarch of the Hunt family, Downey crafted a set of spurs out of one piece of steel, using 100-year-old silver pesos for the rowels. “What do you get a billionaire? This was something unique.”

Downey’s creations have even moved a quiet, reticent fisherman in the village of Cornwall. “One of the fishermen wanted a shark harpoon. He said he was running into 150- to 200-pound sharks and he knew they make good eating. I designed and crafted a six-foot harpoon, which he planned to hang over his boat cabin.”

When a dowager in a nearby manor house lost her century-old fireplace poker, Downey found the same type of wrought iron used to create the fireplace set. Once the iron was hot, the petite dowager twisted the iron herself with Downey’s assistance. “When that iron gets hot, it’s like taffy.”

While blacksmithing used to require a great deal of heavy lifting, power equipment has made the craft more accessible to women. “Some of the best blacksmiths in the world today are women. They have a much more artistic eye.”

Trying his hand at blacksmithing was no big deal for Downey, who has always thought he can do just about anything. “I might not do things as well as others, but better than most,” he jokes. In his early years, Downey built radios, a TV set from Radio Shack and put together his first computer from parts. He’s also tried oil painting, woodcarving and even built bombs. “You could buy a dynamite fuse from the local hardware store. I’d make rockets and high-quality bombs for pond catfish, but I’d be careful about it.”

One of his proudest creations was a log cabin that he built himself, in the Big Thicket, north of Houston, while still with Shell Pecten. “I made everything myself. I cut down the trees with a double-bitted ax—never used a chain saw. I wanted to see if I was the man my ancestors were.”

After the former president of Pecten International retired in 1987, Downey barely took a breath before accepting the role of president at Arco International. Today, he serves on the board of directors for three oil and gas companies, travels around the globe to speak on energy issues and helps manage Roxanna Oil, in Houston, which he founded in 1987.

Though he expects his father and grandfather would be proud of his work as a blacksmith and a woodworker, he feels fortunate that they saw his success at Shell. “They got to read about me in the paper and saw me doing things all over the world. They were proud of me.”

Downey encourages others to give blacksmithing a try. “When you heat that iron, it behaves like clay. You mold it, bend it and turn it any way you want. The secret is that it’s dead easy; it’s only hard to do it really well.” Downey adds that if you want to learn more—or just catch up—send him an email at marlandowney@mindspring.com. “I love hearing from old friends from my Shell days.” ✨
MENTORING ABORIGINAL STUDENTS
Alumnus passes on love of learning

Whether on the field or in the classroom, Georg Gerlach (‘10 Carmon Creek - VSI) knows that kids need to be challenged. “I have high expectations, and more often than not, kids exceed those expectations.”

For 30 years, Gerlach has coached kids’ soccer. In 2013, he brought those coaching skills into the classroom as a science/math mentor at the Morley Community and Nakoda Elementary schools. Located on the Stoney Reserve west of Calgary, Alberta, the schools serve approximately 1,000 children of the Stoney Nakoda First Nation.

Gerlach initially became involved when the Association of Professional Engineers and Geoscientists of Alberta (APEGA) put out a call for student mentors. “APEGA seeks to promote science and math in the aboriginal communities and was looking for volunteers,” he says.

When he first signed up, Gerlach thought he’d give a presentation once a month, share his life story and tell students why they should go into engineering. “I saw pretty quickly that the kids didn’t need another person talking at them. Once a month wasn’t enough.”

Working with the math and science teacher at Morley, Gerlach began visiting once a week, designing labs, leading class discussions, answering questions and expanding on the information in kids’ textbooks. This year, he’s working with grades 4, 7, 8 and 11.

“In the 4th grade class, we’ve grown plants from seeds. I showed them how to set up experiments and record their observations.” Gerlach also put together a lab experiment on light, helping kids learn how light is reflected and refracted and how a prism works. “Most of these students haven’t had that type of hands-on learning before.”

Since funding can be a challenge, Gerlach works with teachers to secure supplies needed for labs. “Sometimes I bring the supplies, sometimes the teacher or school can order them. We try to design labs with home supplies whenever we can.” For example, students learned about chemical reactions during a lab on making common foods. “We made ice cream in a plastic bag.”

With his 8th grade students, Gerlach enjoys teaching about geology and water studies—study topics he is quite familiar with. “I can actually apply things I used to be involved in at Shell.”

One of the biggest challenges Gerlach has found at Morley is poor literacy. “It’s awful to see literacy problems in this day and age. A student will get to the 4th grade unable to read and write properly, but get graduated on. The academic expectations rise as they get older, and these students can’t keep up.”

Another huge issue is absenteeism. “Many students lack good role models. They might miss the bus or need to stay home to look after younger siblings. The reasons are numerous. Some may only show up a couple of times a week.” And, if you’re not at school, you’re not learning. “I marvel at the teachers’ level of patience with this. They have to teach in a way that keeps the students who actually show up engaged, but gives the kids who missed the opportunity to catch up. Often they end up teaching to the lower level of students, which negatively impacts the better-performing students who may start disconnecting from school.” That’s where Gerlach hopes he can help. “I’m there for the kids who want more. That’s the motivation for me. Last year, I had a 14-year-old student who showed up two months after school started. She was shy and lacked confidence, but by the end of the year, she was one of my top math students. She worked so hard and discovered that she was able to accomplish so much more than she thought she could.

“I tell students that life can be a tough place if you’re not prepared. School is an opportunity to make your life easier. Aboriginal students need role models and mentors who believe in them and help give them an understanding of what it takes to further themselves in life. These kids doubt themselves, but they are so smart and so capable. I enjoy being around them. They give me energy.” «
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