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October 2010

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President's Message

From Day 1 in 1978 when I started in the patch, I was told I had to pay my dues. So I worked hard, played hard, put in a lot of hours on a pumper and entertaining customers, two activities that were not mutually exclusive in the 1970s and '80s. This is year number 32 in the oilfield and I have survived numerous downturns — even sold cars to survive in 1987 — so I think I have paid my dues.

Having spent some time lecturing at SAIT, I stressed that marks and education are important. Technical competence is expected, but everyone has to pay his or her dues, put in the time and do an exemplary job.

While there is no shortcut, having a strong network through associations such as the Canadian Association of Drilling Engineers (CADE) makes things easier when looking for help on a project, or even on a job. There is nothing that can beat a business relationship based on a personal relationship. How else do we open doors or have phone calls returned in a sea of technical people, all with similar resumés and marks? How about: “We met at a CADE function; can I buy you a coffee?”

I would also like to take this opportunity to pass along my condolences to Ginette Mitchell and the Mitchell family on the loss of Terry Mitchell in a motorcycle accident on Sept. 10. For those of us who knew Terry, this is a sad loss of one of our friends. The global oilfield family will miss his dedication, enthusiasm, honesty, integrity and lust for life.

John Garden, P.Eng.
President, Canadian Association of Drilling Engineers

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CADE's mandate is to provide high-quality technical meetings to promote awareness of the drilling & well servicing industry. Through CADE, members and the public can learn about the technical challenges and experience gained from our speakers, who are most often CADE members themselves.

We invite you to join CADE and further your professional development.

Past issues of CADENews are available online.

Current issues of *Canadian Well Construction Journal* are available via email, to CADE members only.

CADE is not responsible for any opinion or statement expressed in this publication.



MEMBER PROFILE

Dave Smith

Describe your background and career path.

I am a consulting professional petroleum engineer specializing in field operations. My background in the oil and gas industry began in 1960 as a rig hand, roughneck, water jack, truck driver, cook and bottle washer for Big Indian Drilling based out of Calgary, which soon progressed to working on "big rigs." It was cold, wet and dirty work. I was hooked.

My young man's dreams had to meld with a young woman's expectations, and in 1965, my fiancée persuaded me to go to SAIT and take petroleum technology. That decision changed my life, leading to a degree in petroleum engineering from the University of Wyoming in 1972, and an engineering position with Westburne International (formerly Commonwealth Drilling) working in Iran, as well as working with several other large companies.

1978 was a pivotal year, when I joined the Norward Energy group as operations manager and partner (along with an old SAIT classmate) of the newly created consulting company Norwest Engineering in Calgary. In the beginning, Norwest primarily provided drilling, completions and construction wellsite supervisors for some of the major operators. Clarence Stewart, a former classmate from SAIT, joined the group. His experience in production and well completions rounded out the services of the company. We then offered engineering and project management services.

Eventually, Clarence and I bought out the other partners and continued to run Norwest Engineering until the changing economy (and my changing hair colour) made me switch gears and return to one of my first loves. No, not the fiancée — independent consulting.

What is the most rewarding part of your job?

This industry got into my blood through hands-on training and exposure, riding shotgun with drilling foremen who were some of the best drilling men before they turned me loose on my own, supervising drilling operations as the company man. Those were energy-packed days, and I was given freedom and enough rope to hang myself.

Throughout my career, I have enjoyed being involved in all levels of projects from well design, costing, regulatory submissions, selecting and contracting services, managing the day-to-day operations and reporting, as well as marketing and administration for my company. I think the best part of the job has always been taking a project from the initial concept and bringing together all the components for a successful result and a satisfied client.

What is the toughest part of your job?

Early in the Norwest days, we provided project monitoring services through Canadian International Development Agency to Pakistan's Oil and Gas Development Corporation on a \$44-million technology transfer and training project. This was a five-year government contract that ended up lasting eight years.

One of the more dramatic and exotic projects was when I was contracted by Petro-Canada International Assistance Corporation as engineering advisor to the Philippine National Oil Company in the drilling and completion of an oil well on the small island of Cebu.



Photo: Mike MacKinnon

The technical and logistical aspects of the job were overshadowed by the drama of the revolution against the Marcos regime. At one point amidst much gunfire and military action, the rebels commandeered the hotel I was staying in, and for a several days held the government forces at bay until they negotiated a resolution. We, the hotel guests, were not harmed in any way, but we were not free to come and go. One evening I had the pleasure of dining with the rebel leader and his lady, a beautiful local actress. It was like right out of the movie *Casablanca*.

I would say the toughest part of my job is effectively adapting to the ever-changing demands and activity levels inherent in the industry.

What are some of the biggest changes you have seen in the industry?

I have seen many changes in the industry brought about by the technical advances to bits, mud, directional/horizontal, underbalanced drilling, automatic rig design and top drives. Wells that used to take many months are now done in days. Focusing on human resources and personnel management, safety, the environment and increasing regulatory requirements has also changed the industry. Entire industries have been created within the oil and gas business during my career — all for the good, I hope.

Who has had the greatest influence on your career?

I have met and been influenced by many people, including clients, consultants, salesmen and oilmen. Many have become lifelong friends. I can't say who has had the greatest influence. Perhaps my older brother Jim, who as a young man returned home from roughnecking with rig tales and stories that first fired my imagination.

What do you like to do when you are not working?

In the last few years I have taught a one-week course at Enform called Drilling Engineering a couple of times a year. I also taught a Drilling Engineering course as an option course at SAIT for one semester. It was a rewarding experience, and I learned more about the subject by teaching.

When I am not plying my trade as an independent consultant and teacher, I am an avid golfer, with an 18 handicap. I am a volunteer coordinator for Inn From The Cold, providing emergency shelter for homeless families and others in need. My wife Beverly Reynolds and I are members of the congregation of Knox United Church and serve on the board of directors.

What would you say is your greatest accomplishment?

My greatest accomplishment is my son and heir Jason, an engineering and commerce grad from the University of Alberta and now working for Canadian Natural Resources as an exploitation engineer. His wife Sonia presented us with our first grandchild Mila, on Christmas Eve, which has certainly been another life-changing experience.

Any last words?

There was a time that guys my age took retirement. I hope to continue working on interesting projects and mentoring. Some of the tools are newer and shinier, but the challenges only get better and better.

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P

STUDENT PROFILE



Allison Yuen

CADE–University of Calgary Liaison Chemical Engineering

I am majoring in Chemical Engineering with a minor in Petroleum Engineering at the Schulich School of Engineering at the University of Calgary.

I have completed my third year of school and am currently on a 16-month internship with Shell Canada, where I work as a surveillance engineering intern in the upstream Americas north onshore gas production division, primarily focusing in the Foothills region. In addition to this internship, I previously worked a four-month summer term as a reservoir engineering intern in unconventional oil, also with Shell Canada.

This is my second year as an executive of the University of Calgary Petroleum and Energy Society (PES). Last year, I was vice-president of communications in addition to being the chief editor and creator of a joint newsletter with the Society of Petroleum Engineers Young Professionals known as *The Uplift*.

Currently, I am the director of academic relations and represent PES in several affiliated organizations, including CADE.

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STUDENT PROFILE



James Angel

CADE-SAIT Liaison Petroleum Technologies Student

I am the 2010–11 CADE-SAIT student liaison. This is my first year as Petroleum Technologies student and I am quite honoured to be assigned to this position.

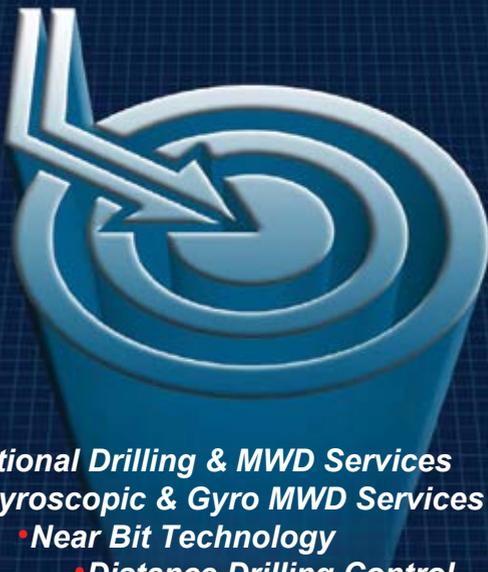
I previously attended NAIT and took the first year of the Forest Technologies program. In 2003, I started to work drilling rigs for a company called Schmidt Drilling and later with Trinidad Drilling. This eventually led to a position as a driller with Central Alberta Well Services, working extensively in the Athabasca–Slave Lake region.

We worked on shallow gas completions for quite some time, with the occasional abandonment when work was thin.

After a while, I was sent up north to Red Earth Creek, Alberta. In this area the work was quite varied, allowing me to see a number of different aspects and practices. We worked on shallow gas completions, and for variety, and when I was available, we also did some testing, snubbing and coil tubing work. Working with other services gave me an excellent opportunity to see other facets of completions.

I felt the need to further my career and enrolled in the Petroleum Technologies program here at SAIT.

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Association/Membership News

Welcome New Members

NAME	COMPANY	TELEPHONE	EMAIL
Olumuyiwa Awoseyi	Geomines Nigeria Ltd.	[234] 8052573851	olumuyiwa7777@aim.com
Jay Bell	Flowline Solutions	403-990-6035	jay@flowlinesolutions.com
Rita Clelland	Global Steel Ltd.	403-237-8108	rcllland@globalsteel.ca
Jeffrey Cyre	Shell Canada Energy	403-804-8792	jeffrey.cyre@shell.com
Sarah Dantzer	Crescent Point Energy Corporation	403-787-6902	sdantzer@crescentpointenergy.com
Dustin Deschamps	Atlantic Directional Services	403-984-1203	dustin@atlanticdirectional.com
Graham Evans	ZAAK Solutions Inc.	403-808-9002	graham@zaakolutions.ca
John Gough	Petrowest Energy Services Trust	403-384-0412	johng@petro-west.com
Lars Green	NBC Technologies Inc.	403-269-7373	lars@nbctechnologies.com
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Eric Schmelzl	Halliburton Canada Inc.	403-290-7699	eric.schmelzl@halliburton.com
Imran Yousaf	Shell International	923-335-282858	yousaf70@yahoo.com

Members On The Move

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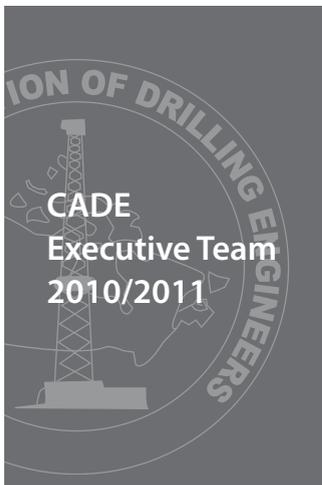
CADE Membership Change of Address

Log on to cade.ca to become a member or update your address using our online form.

CADE Membership Renewals 2010-2011

A CADE membership year is September to September. CADE members should have received a renewal email with a link to the CADE website (www.cade.ca). The benefits of being a CADE member include an invitation to APPEGA's professional development hour, opportunities to stay abreast of technological and industry advances, and great opportunities to network at drilling conferences. Your prompt attention will be greatly appreciated when you receive your renewal notification.

TITLE	NAME	TELEPHONE
President	John Garden	403-265-4973
Past President	Patrick Murphy	403-266-7383
Vice-President	Eric Schmelzl	403-290-7699
Secretary	Tammy Todd	403 613-8844
Treasurer	Alice Skoda	403-232-6066
Membership Chairman	John Burnell	403-265-4973
Education Chairman	Mike Buker	403-213-3615
Social Chairman	Dan Schlosser	403-531-5284
CWCJ Editor	Todd Brown	403-230-3055
Technical Chairman	Jeff Arvidson	403-232-7100
IT Chairman	Graham Evans	403-808-9002
Drilling Conference Liaison	Kim Barton	403-693-7576
Executive Member	David White	403-699-5160
CAODC Liaison	John Pahl	403-292-7966



Association/Membership News

Editor's Note

The issues are coming out fast now that we are into this year's 10-issue run of the *Canadian Well Construction Journal (CWCJ)*. There has been plenty of action in our industry this fall as we get into the colder months and the winter programs start to get underway. In this issue, we have an excellent profile and feature story, along with our other regular information.

We are launching a new feature in the *CWCJ* this year called Bits & Trips. Please feel free to send us any announcements you may have for new products, senior personnel changes or company news. We will do our best to get as much of it in as we can. This will be a good vehicle for all our members to contribute and hopefully make this section a well-read feature.

With incoming president John Garden now at the helm this year we are preparing to take further strides forward with CADE as we continue to improve the value our organization is capable of providing. It has been a very productive few years at CADE, and we are seeing an increase in members and luncheon attendees.

Hope you enjoy this month's issue, and I look forward to speaking with you all again next month.

Sincerely,

Todd Brown, Managing Editor, Canadian Well Construction Journal

tbrown@themotorcompany.ca | cell: (403) 969-8148

Upcoming CADE Luncheon

Date
Wednesday, October 13, 2010

Place
The Westin, Calgary

Time
11:30 a.m. — Reception
12:00 noon — Luncheon
12:30 p.m. — Presentation

Speaker
John Garden,
Drilling Manager,
Albania, Bankers Petroleum

Topic: Drilling Horizontal Wells in Albania — Canadian Experiences Internationally

Working internationally presents many challenges, not unlike working in remote locations in western Canada. Culture, language and proximity to services all provide challenges.

This presentation will focus on the pre-planning for drilling horizontal wells internationally and the challenges with shipping equipment and people a world away. A focus on operational issues and solutions will also be presented.

Bio: John Garden holds a B.Sc. in Chemical Engineering from the University of Calgary. With over 30 years of experience in the oil and gas industry, he has worked as a cementer, tool man and after graduation from U of C in 1993, he founded and managed Deadeye Engineering in 1995. John has managed the drilling and completion of hundreds of horizontal wells in western Canada, and is currently serving as CADE president for the 2010-11 term.

CADE Technical Luncheon Ticket Price Increase

Effective September 1, 2010, the following ticket price increases will take effect (prices include GST):

Visit cade.ca for all ticket purchases

Members: \$45

Non-members: \$55

Full tables of 10: \$450

Student: \$15

Walk-up: \$55

GST Registration #R123175036

Upcoming Events

CADE Technical Luncheon

Wednesday, October 13, 2010
The Westin, Calgary

CADE Technical Luncheon

Wednesday, November 10, 2010
The Westin, Calgary

CADE Technical Luncheon

Wednesday, December 8, 2010
The Westin, Calgary

bits & trips

At-Bit Azimuthal LWD Subject of September CADE Luncheon

The CADE luncheon held in Calgary on Sept. 9 was a success with over 200 tickets sold.

Jason LeClair of Halliburton spoke on optimizing wellbore placement in the Cardium formation using at-bit azimuthal logging-while-drilling (LWD) technology. Jason LeClair holds a B.Sc. in Earth Sciences and has worked over 13 years in the oil and gas industry as a logging geologist, LWD operator, geosteering engineer and an LWD technical advisor. NAL is the largest user of the GABI tool in the Cardium. The tool provides a 360-degree wellbore image in real time. The tool is set three metres back of the bit, compared to 10–15 metres back with the normal gamma tool.

"When you drill...with conventional MWD [measurement while drilling]



drilling tools, you normally sit 15 to 20 metres back in the drill string, so when you think about it, when the directional driller slides, he expects a certain performance," LeClair said. "What if he doesn't get that performance? He has to wait for that 15 or 20 metres in order to see what his slide did. He might have built too much angle, or lost too much angle, he might be way off the line." "So then he...corrects again and tries to remedy that. Now it's another 15 to 20 metres before they see that change again. With an at-bit inclination [tool] you actually get immediate feedback, and you know the trajectory of the well right at the bit, it's much better for controlling where your well is actually placed." CADE luncheons offer a chance to learn and network. An attendee said, "This month's edition of the CADE luncheon was very enjoyable. It was a great chance to see some people, both customers and competition, that I haven't seen over the long, slow summer. This will prove to be especially important as the rig count increases as expected and the opportunities to see our customers face to face will be harder to come by."

If you have any questions or comments, please visit the CADE blog at www.cade.ca/blog.

The next CADE luncheon will be on Oct. 13.



Rheotech Has New Formation- Strengthening Pill

Rheotech Drilling Fluid Services says it has developed a new one-sack wellbore strengthener that can reduce intermediate casing string requirements and strengthen weak upper-hole formations prior to encountering higher downhole pressures.

When used instead of intermediate casing — but only where regulations are allowed — RDF-Seal can save \$500,000–\$700,000 in well costs and cut rig time by four to six days, says Ryan Russell, technical account representative for Rheotech, who adds that the product is being extensively used in the Wild River / Wild Hay area of northwestern Alberta.

"It's a good operational strategy just from an economics standpoint," he says. The cost saving might be enough to make a marginal well economic while the savings on five or six wells might pay for another well."

For more information, visit Rheotech at www.rheotech.ca.

CADE's on



There is now a CADE LinkedIn group. LinkedIn, established in 2002, is mainly used for professional networking. With over 75 million users, CADE hopes to use LinkedIn to spread information to all of its members. The CADE LinkedIn group can offer valuable networking opportunities, and will allow group members access to drilling and completion-related information that can be beneficial.

To find the group, log into your LinkedIn account, click on the Groups tab and search "Canadian Association of Drilling Engineers." The Canadian Association of Petroleum Producers is among other industry groups considering joining.

For more information or assistance with the CADE LinkedIn group, contact Shannon at sbk@sbkelsick.com.

CBW Names New Marketing Guru



CBW Resource Consultants is pleased to announce the addition of Ed Besuijen to its staff.

Besuijen's role as marketing coordinator is securing work for the company's technical staff as well as for its wellsite supervisors. CBW Resources Consultants offers drilling, completions and construction project management and wellsite supervision.

Besuijen can be reached at 403-510-2167 or edb@cbwresourceconsultants.com.

United Diamond Moves Forward as Ultrerra



Launched in 2000 and based in Leduc, Alberta, United Diamond quickly grew a name for itself as the supplier of choice for polycrystalline diamond compact (PDC) bits, and in less than a decade commanded 35 per cent of the western Canadian PDC market.

With technologically enhanced tools that allow operators to drill consistently, accurately and through hard formations, the company offers a suite of products that are used from the oilsands of northern Alberta to the deserts of the Middle East. In 2007, United Diamond was acquired by Houston-based Ultrerra Drilling Technologies and the marriage allowed the small Alberta

company to expand its product base and push into the U.S. market.

United has now adopted the Ultrerra brand, combining the best practices of the two companies and offering customers expanded manufacturing and repair capacity in North America.

"Our customers really shouldn't notice any difference in their relationship with us," says Bill Hoy, Canadian sales manager for Ultrerra. "We're now able to offer products and services globally, but we're still open-minded enough and agile enough to meet the diverse requirements of our customers."

For more information, visit www.ultrerra.com.

PES Prepares Tomorrow's Energy Professionals



The University of Calgary Petroleum & Energy Society (PES), formerly known as the University of Calgary Petroleum Club, is a non-profit organization run by students, with a fundamental purpose to create an informed, knowledgeable and connected workforce in the oil and gas industry. Its mission is to equip students with a solid foundation of knowledge, experience and networks so that they may have a competitive edge when entering the oil and gas industry and meet industry's demand for a skilled new workforce. PES does this by organizing educational events, field trips, technical lectures and tours, and it seeks to engage with industry professionals for mentorship and potential networking. PES recognizes the importance of having strong technical and professional leaders in tomorrow's energy industry. The organization has recently taken steps to ensure that its student members are receiving the proper development and

access to resources that will help them become future industry leaders. PES also recognizes that western Canada is home to one of the largest and most substantial hydrocarbon basins in the world in terms of oil, gas and coal deposits. Developing these resources in an economic and environmentally sustainable manner will present challenges for our future generation of graduates. PES is fully prepared to face these challenges by providing the energy industry with the next generations of inspired and energy-driven graduates.

To fulfill its mandate, PES has identified four key areas of student development on which to focus its efforts. They include:

- Professional development
- Experiential learning
- Networking
- Social responsibility

The organization believes that by providing students with the opportunity to gain

new knowledge, experience the industry first-hand and acquire new networks, they will gain a competitive advantage when entering industry.

PES is the official Society of Petroleum Engineers (SPE) Calgary student chapter, is represented on the APEGGA student liaison committee, and maintains strong ties with the Canadian Well Logging Society and with CADE.

We also believe in giving back to the community that has supported our growth. Strong community involvement allows us to offer our well-rounded members opportunities to seek and develop their passions. For the 2010-11 academic year, the organization plans to have approximately 2,500 associate members and approximately 300 full-time members. It also hopes to increase membership further by reaching out to students in other faculties.

For more information about PES, please visit www.pesucalgary.ca.



TIME IS MONEY

New drilling technology improves ROP and economics in challenging formations

by Richard Macedo

(Editor's note: This article originally appeared in the June edition of *New Technology Magazine*, and is reproduced here with permission.)

Time is money. The phrase is ubiquitous in the industry, particularly when discussing drilling costs. A new drilling technology, which has drastically improved economics in challenging formations, has proven this old adage to be true once again.

To address economic issues related to high-cost development, a prominent service provider and producer have teamed up over the past few years to develop a system to overcome challenges associated with drilling in hard, abrasive formations.

The collaboration between Suncor Energy and Weatherford International resulted in the multi-phase performance drilling (MPPD) system, which has evolved over the past five years. The drastic increase in the rate of penetration (ROP) as a result of using MPPD allowed Suncor to realize a savings of up to \$1.5 million on a single well. MPPD is changing the game for operators in these challenging conditions, the companies report.

With an overall success rate of 90 per cent, the system has primarily been used in Foothills drilling where the terrain, geology and potential costs are formidable. Systems like these that drive down expenses by doubling, tripling and in some cases quadrupling the rate of penetration make more projects economically feasible.

"All Suncor projects have to meet a defined return on investment target before

they go ahead," says Bob Staysko, contract drilling specialist with Suncor. "While this makes many high-cost developments challenging, particularly in the current market where natural gas prices remain weak, it's a business fundamental."

As a result, historically when the cost of development was too great to justify the capital investment, development in many areas was delayed until the economics made sense. The MPPD system is optimal for drilling in hard, abrasive formations like the Nikanassin or Cadomin.

"Membrane nitrogen generated on site is compressed and injected, along with the drilling fluid down the drill string through the bit, resulting in a lighter mud weight, and that has a direct relationship to the rate of penetration, so you're able to drill faster," Staysko says. In order to handle the increased cuttings coming to surface because of the higher ROP, specific operating procedures have been implemented and are strictly followed by both Weatherford employees and rig contractor employees.

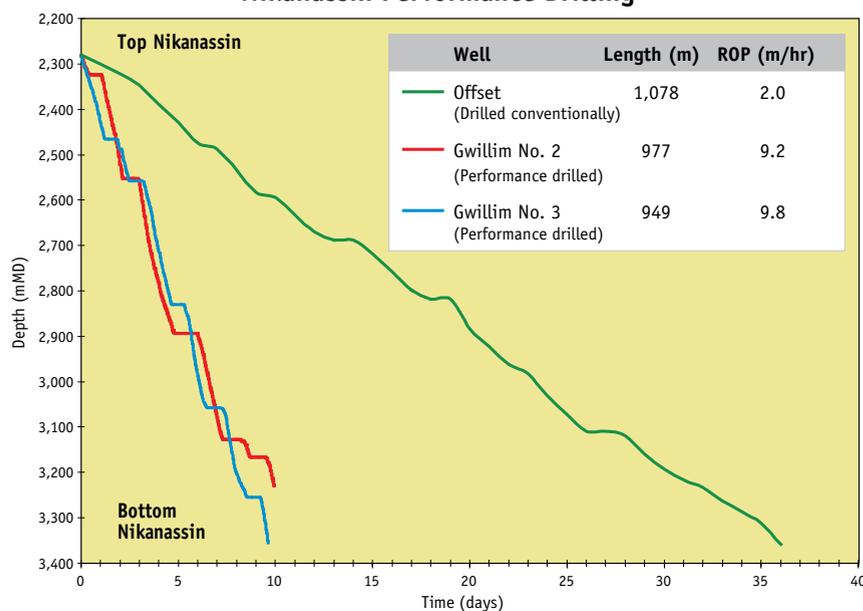
"A close working relationship between all contractors on location is critical for success," says Rich Norton, operations manager for Weatherford's Controlled Pressure Drilling group. Annular effluent is safely handled by Weatherford's specialized surface equipment, processes and engineering. ▶



Drilling technology is constantly being improved to enhance well construction economics.

Photo: Joey Podubny

Nikanassin Performance Drilling



Using MPPD dramatically shortened drilling time on two Gwillim wells in British Columbia.

“Safety is a very high priority in both companies, and we’re pleased to say that to date there have been zero incidents associated with MPPD,” he says.

MPPD was first developed in the Panther field, west of Sundre, Alberta, for use in typically slow drilling formations. It had a dramatic effect on decreasing drilling time. “With the type of formations we see in wells in Panther, you’re drilling 1,500 metres of a 6,000-metre well over a period of six days; that’s 25 per cent of the well in a very short time period,” Staysko says.

in applications that meet a set of criteria before a project is proposed for approval. For example, hole stability is essential. Nitrogen is used because it’s an inert gas, which renders it low-risk.

“We like to drill with maximum nitrogen to get the lightest weight that we can,” Staysko says. But, he explains, the amount of nitrogen used can be adjusted depending on the type of rock the company is drilling through.

Alek Ozegovic, engineering manager of Weatherford’s Controlled Pressure Drilling group, says complex wells of this kind need

what the ROP outcome would be. Most companies are willing to try something new after it has been proven, Corb notes.

“Suncor was committed to making a change in their drilling process versus doing it the traditional way,” he says. “It was a real commitment on their part, in helping develop the process, not just trying it once and walking away.

“There are always unknowns when you try something new, but these are manageable risks based on proper pre-job planning both in the field and in the office. Getting it right the first time pays off in many ways.”

In addition, the MPPD process provides a greater degree of safety for the rig crew and the whole drilling operation, the companies say. Not only does this help with ROP improvement, but effective equivalent circulating density management mitigates risk associated with background (nuisance) gas and encountering high-pressure, low-volume formations.

“Over the last five years, we’ve completed over 30 projects on different wells and have perfected the technology,” Staysko adds.

Weatherford has applied for a patent on this technology and is ready to work with other customers to continue successfully applying it. ■



“When you go from 35 days to 9 days drilling, you can see the economics are significant.”

– Bob Staysko, Contract Drilling Specialist, Suncor Energy

At Kelly Lake in British Columbia, the company has used MPPD in a pad configuration and has drilled 80 per cent of a well over a period of eight days. The 1,000-metre Cadomin horizontal section required only 70 drilling hours.

Drilling the Nikanassin formation in the Gwillim field in British Columbia also netted some very attractive results. ROP went from two metres per hour to nine metres per hour.

“Time is money when drilling. When you go from 35 days to 9 days drilling, you can see the economics are significant,” says Staysko.

Multi-phase performance drilling is used

proper planning to ensure flawless execution. Weatherford creates a custom-engineered drilling program for all of the MPPD projects to complement the operator’s well program.

“Extra equipment is needed in a multi-phase application, but despite the extra up-front costs, savings in the end justify the means,” Ozegovic says.

His colleague, Keith Corb, a technical support consultant with Weatherford, adds, “It’s always been about the money for operating companies and the need to provide new viable technical drilling solutions.”

When Suncor and Weatherford first teamed up to try the process, no one knew

PICKING UP STEAM

Drilling completions rose in August from a year ago, with horizontals setting the pace, but activity remains well below earlier years

Although up from last year's dismal figure, well completions in August were down sharply from earlier years, reflecting industry's continuing shift to drilling fewer but longer wells, mainly in the horizontal plane.

Canada-wide, industry completed 667 wells in August, up 13.6 per cent from 587 in August 2009, but down 46.3 per cent from 1,242 completions posted in August 2008.

Over half (52 per cent) of this year's August completions were Alberta wells, with Saskatchewan (32.5 per cent), Manitoba (13 per cent) and British Columbia (2 per cent) rounding out most of the balance.

Of all wells drilled, the average length rose 30 per cent to 1,796 metres from 1,380 metres in August 2009, and 22 per cent longer than the August 2008 figure of 1,473 metres per well.

The trend toward longer, mostly horizontal wells, also continued. Between January and August, the average well length/depth grew 26 per cent, to 1,675 metres from 1,332 metres in the comparable 2009 period.

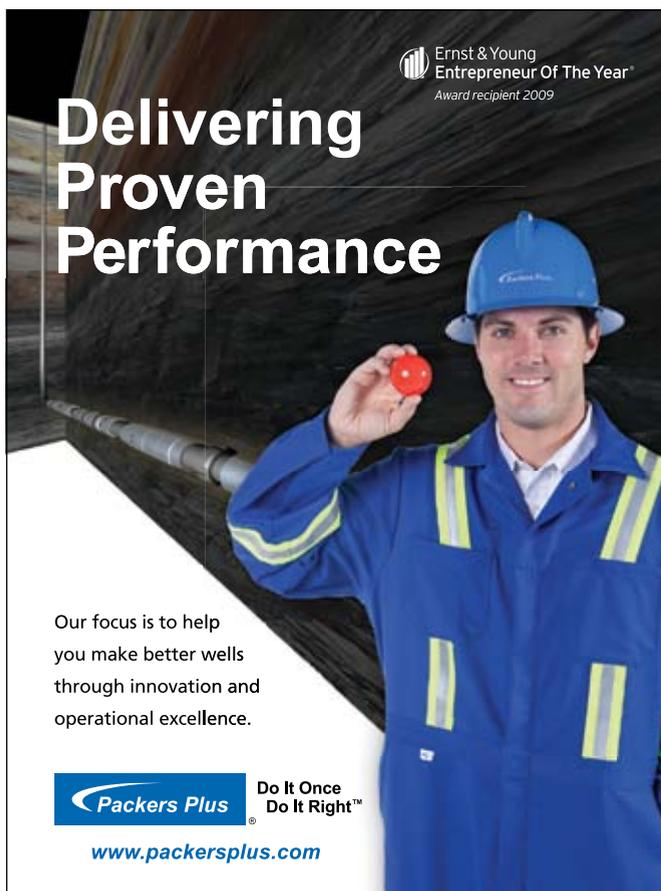
Apparent as far back as 2001, the shift to longer-reach wells has accelerated sharply over the past 18 months, as producers have increasingly opted for horizontal, rather than vertical, wells. In the same period, vertical, shallow natural gas drilling has suffered, thanks largely to continuing low gas prices.

Of completions done between January and August, notably fewer were gas wells. As a percentage of the total, the figure has declined since 2005, when 71.6 per cent of wells completed were gas. Just 44.4 per cent of completions in western Canada were gas in the year-to-date, down from 63.7 per cent of wells completed in last year's period.

The split between exploration and development wells has also evolved, with exploration making up a smaller part of today's total. The proportion has declined steadily since 2005, when roughly one-in-four (26.6 per cent) wells completed in western Canada was for exploration. After slipping since then, the figure is now 18.3 per cent for year-to-date 2010, down from one in five or 20 per cent last year.

In Alberta, development outnumbered exploration wells more than five to one, with 3,823 development completions posted year-to-date, and just 738 exploration wells drilled in the same period. Next door, in Saskatchewan, of 1,492 wells completed through August, 1,194 were development and 298 were exploration. Across western Canada, 1,221 out of a total 6,746 wells completed were in the exploration category.

— *Daily Oil Bulletin*



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SAFETY



Safety Alert (#25-2010)

Worker Injured by Falling Diving Board

Incident Type: Personal Injury / Lost-Time Incident

Release Date: September 3, 2010

Location: Western Canada



Description of incident:

- Two workers were preparing to adjust the fall protection post in the monkeyboard area while the rig mast was laying over on the crown stand. Worker one was positioned in the monkeyboard structure, approximately 11 feet from the ground level. Worker two was positioned on the catwalk.
- Worker one attempted to throw a rope around the top section of the fall protection post, but missed catching the returning end. The rope fell towards the beam he was standing on, so he bent down to retrieve the rope. As he stood up, he grabbed and pushed the diving board that was positioned facing up and beside him. The diving board tipped out towards the crown stand and he lost his balance, causing him to fall off the structure and strike the diving board, causing injury.
- The worker was wearing and using the appropriate fall protection equipment.

What caused it:

Examination of the scene revealed that the following factors contributed to this incident:

- The back of the diving board is hinged to the monkeyboard and is five feet long. At the other end of the diving board is a four-foot beaver tail attached with a hinge. When the mast was down, the diving board was stood in an upright position and secured by a single rap of sash cord.
- When the worker positioned in the monkeyboard area stood up from retrieving the fallen rope, he grabbed and pushed the diving board. This action caused the diving board to pivot down and slip out from the single wrap of sash cord.
- The workers and job safety analysis (JSA) did not identify the potential of the diving board pivoting due to being inadequately secured, creating a loss-of-balance situation.

Recommendations:

- Have the back section of the diving board hinge removed and permanently welded to the monkeyboard. This will prevent the inadvertent movement of the entire board, while the derrick mast is in the horizontal position laying in the crown stand. The beaver tail section will still have the ability to hinge and fold back.
- Ensure that personnel have the appropriate amount of time to review the related JSA when a change of task is encountered. If a potential hazard or hazards are identified for a particular task, and a JSA is inadequate or does not exist, the JSA must be revised or created to address the hazardous issues.
- The driller or a competent worker should supervise the rig up of monkeyboard components.
- Companies should identify and evaluate similar designs within their fleet and provide immediate mitigation.

Contact: Enform | 1538 - 25 Avenue NE | Calgary, Alberta, Canada T2E 8Y3 | E: safety@enform.ca | T: (403) 250-9606 | www.enform.ca

DISCLAIMER: This Safety Alert is designed to prevent similar incidents by communicating the information at the earliest possible opportunity. The information may change accordingly over time. It may be necessary to obtain updates from the source before relying upon the accuracy of the information contained herein. This material is presented for information purposes only. Managers and supervisors should evaluate this information to determine if it can be applied to their own situations and practices.

Stats At A Glance

Drilling Rig Activity *September 28, 2010*

	ACTIVE	DOWN	TOTAL	% ACTIVE
Alberta	219	332	551	40%
Saskatchewan	71	61	132	54%
British Columbia	42	56	98	43%
Manitoba	13	6	19	68%
Western Canada Total	345	455	800	43%
Northwest Territories	-	1	1	0%
Northern Canada Total	-	1	1	0%
Ontario	-	1	1	0%
Quebec	-	2	2	0%
New Brunswick	1	1	2	50%
Nova Scotia	1	-	1	100%
Newfoundland	1	-	1	100%
Eastern Canada Total	3	4	7	43%
Canada Total	348	460	808	43%

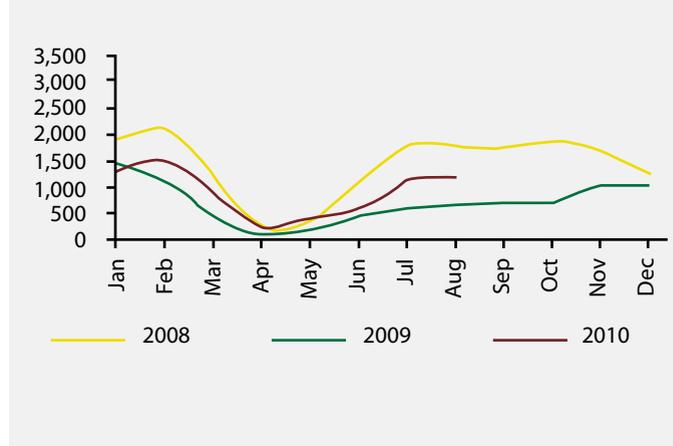
Service Rig Activity *September 28, 2010*

	ACTIVE	DOWN	TOTAL	% ACTIVE
Alberta	368	290	658	56%
Saskatchewan	121	66	187	65%
British Columbia	17	14	31	55%
Manitoba	17	2	15	87%
Western Canada Total	519	372	891	58%
Quebec	-	2	2	0%
Eastern Canada Total	-	2	2	0%
Canada Total	519	374	893	58%

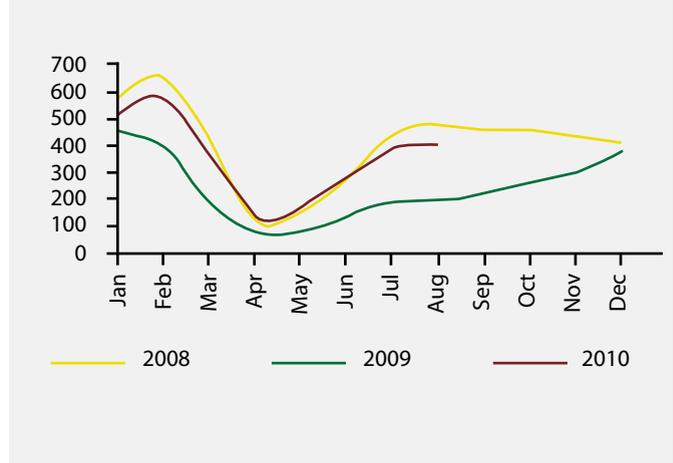
JOURNAL CONTENT

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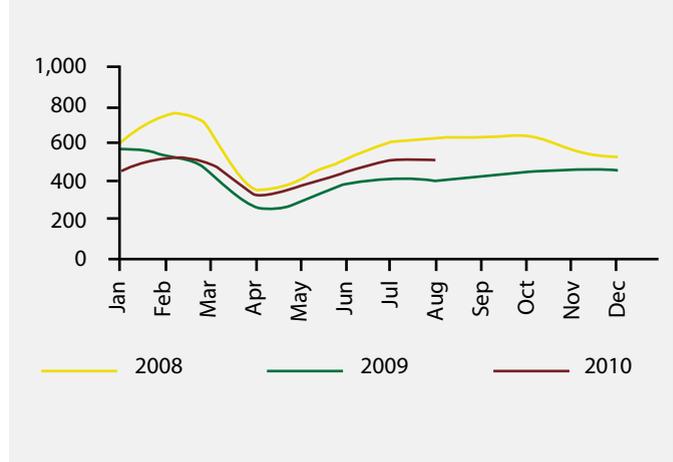
Canadian Wells Rig Released *August 2010*



Active Drilling Rigs in Canada *August 2010*



Active Service Rigs in Canada *August 2010*



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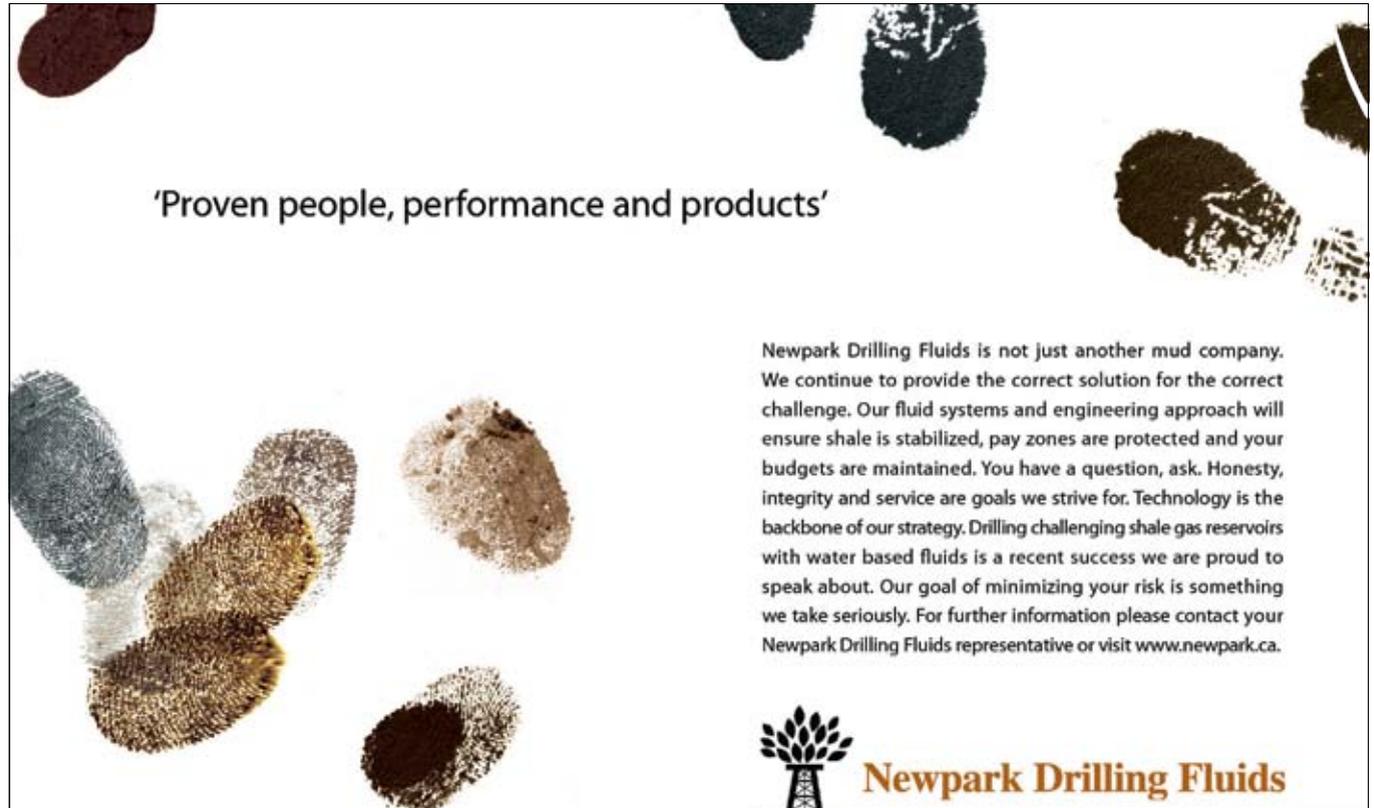
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