

# OFFSHORE FRONTIERS



United Kingdom:  
Record Developments



Robert L. Long  
CEO

# Welcome

Transocean's strong performance in the U.K. North Sea continues to benefit our clients who have used our offshore drilling rigs for more than four decades.

Among the most notable achievements of our U.K. fleet of nine semisubmersible rigs, the *Paul B. Loyd, Jr.* has operated almost continuously in the harsh environmental conditions West of Shetlands for more than 10 years. The *Loyd* not only is the sole rig to work in this demanding area for so long, its crews have also set several technical records.

The *Transocean John Shaw's* performance drilling water-injection wells for Nexen on its Buzzard field also is notable. The Buzzard field is one of the largest additions of petroleum reserves in the U.K. North Sea in a decade, and while working on the field, the rig became the first to perform concentric injection completions.

There are many other examples of great performance. The *Sedco 711*, a Shell semisubmersible of the year, is the first rig to use the Varco casing running tool in the U.K. North Sea. The *Sedco 714* last year became the first semisubmersible rig to utilize a riserless mud return system in the area. And the *Sedco 712* and *J.W. McLean* have achieved a zero TRIR (Total Recordable Incident Rate) year-to-date this year, while all nine of our U.K. semisubmersible rigs are heading towards three months without a single recordable incident.

Worldwide, as we continue to pursue our operational and safety targets, including an incident-free workplace, I encourage everyone to remain focused on our business at hand and not be distracted by items, such as the pending merger with GlobalSantaFe Corporation.

Our outstanding FIRST Excellence Award recipients, who are profiled in the special insert to our magazine, show that we can overcome any challenge by adhering to our core values as well as our workplace and safety processes. I encourage everyone to keep up the good work in these areas.

Robert L. Long  
Chief Executive Officer

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Volume 8. Number 1



## Mission Statement:

To be the premier offshore drilling company providing worldwide, rig-based well-construction services to our customers through the integration of motivated people, quality equipment and innovative technology, with a particular focus on technically demanding environments.

## Core Values:

**F**inancial Discipline  
**I**ntegrity and Honesty  
**R**espect for Employees,  
Customers and Suppliers  
**S**afety  
**T**echnical Leadership

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## On the Cover:

Instructors Gary Crombie and Eddie Hall deliver a major emergency management course at Transocean's training center in Aberdeen, Scotland, just one of the company's many approaches to personnel development.

## FEATURES

No other offshore drilling contractor can count Transocean's experience in the U.K. North Sea, which dates to the mid-1960s. The adaptability and reliability of the crews of our U.K. North Sea fleet continue to help clients succeed while developing more people than ever before.

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## SPECIAL INSERT: Transocean FIRST All-Stars

*Offshore Frontiers salutes the recipients of the 2006 FIRST Excellence Award*

**T**he *Sedco 711* has faced many challenges, but one Shell objective appeared especially daunting: double the feet drilled per day for 12-1/4-inch hole.

Double the footage drilled?

“It was like waving a red rag in front of a bull,” recalls *Sedco 711* OIM Dougie Brown, adding that when the semisubmersible rig began working for the client in 2004, that section’s drilling rate was approximately 1,800 feet per day.

“Drillers and crews have a lot of red in their personality, and all those reds went to work,” he explains, referring to the company’s “Colors” system for identifying key personality traits. “We improved connection time, limited back reaming and improved our cuttings-handling system using augers and a vacuum system.”

The results on the first four wells under the Shell contract set a new standard including a high-end rate of 4,000 feet per day for 12-1/4-inch hole.

“We smashed the goal, and there was no harm to personnel or the environment,” Brown says, smiling as the rig worked offshore Ireland last fall.

That performance was just one reason why the *Sedco 711* received a Transocean FIRST Excellence Award for 2006. In addition, the rig was named a Shell Rig of the Year in 2005.

It also reflects the adaptability and reliability of the crews of the Transocean U.K. North Sea semisubmersible fleet who are building on the company’s U.K.-leading experience to help clients succeed while developing more people than ever before.

## U.K. North Sea: RECORD DEVELOPMENT

*Transocean Prospect*  
during reactivation  
to service.





View from the Driller's cabin, Transocean Prospect.

"The rigs have done really well for the clients," says Doug Halkett, Northern Europe Division Manager, adding that longer term contracts at attractive dayrates are the reward.

"We are booked up for this year, and 2008 and 2009 should be pretty good, too," he says. "Every rig is working. There are a lot of newer, smaller operators in the U.K. these days, and it is their requirements, combined with the operators who have been here for many years, which is driving the upturn in rig demand."

#### Experience the Difference

The Transocean U.K. North Sea fleet's success is no overnight development.

No other offshore drilling contractor in the United Kingdom can match Transocean's experience. The company's semisubmersible rigs have constructed

approximately 40% of all wells drilled by floaters in the U.K. North Sea. That is 1,635 wells, with more than 1,000 wells than the nearest competitor, according to ODS Petrodata records that began in 1984.

Many rigs contributed to the record, which would be even greater if data were available from the mid-1960s. That's when Transocean began operating in the U.K. North Sea after launching the first jackups to work there in more than 250 feet of water and year-round.

Over the years, there have been many top-performing U.K. rigs, and the *Sedco 700-series* rigs have done yeoman's work. But there has been only one rig to work almost continuously West of Shetlands over the last 12 years: the *Paul B. Loyd, Jr.*

Setting record after record for BP, the *PBLJ* is still on the job West of Shetlands. One of the world's



harshest environments, West of Shetlands is known for 100-foot waves, 110-knot winds and strong currents.

“The currents really are horrendous,” says former Asset Manager Mike Scott, especially when you are trying to run completions; that’s very challenging.

But crews do not solely rely on the moored rig’s exceptional stability characteristics and station keeping to get the job done for BP. Their innovations include adapting a BOP-hopping tool so that the stack does not have to be pulled and run between adjacent well locations. That saves time and reduces exposure to potential injury, both of which add to the bottom line.

Other efficiency measures proactively made by the *PBLJ* Team include installing a deck-to-rig-floor pipe-handling system, and more recently, finding ways to reduce their dependence on both supply vessels for bulk mud supplies and support vessels for close

standby cover when working over the side.

Another effective and efficient rig is the *Transocean John Shaw*, the first semisubmersible rig to run concentric injection completions on the Buzzard field for Nexen.

The *Transocean John Shaw* made the most of its opportunity to drill water-injection wells on Nexen’s Buzzard field, paving the way for the largest field to be put on production in the U.K. in recent years. Early water injection was critical to the high ramp-up in production planned on this field, and the *John Shaw* delivered — on time and under budget.

#### Big Trees, Big Results

The rig batch-set up to four subsea trees by finding ways to store all four of the 49-ton trees on deck, leaving only about an inch between each of the 18-foot-long structures. It might sound complicated to strip off about three tons of equipment to get the trees on the skidding system and then put the equipment back on the trees after skidding them on deck. However, by the time the trees were set, the crews had achieved days of overall operational time savings.

“It has definitely saved time and risk to potential injury,” says OIM Kenny Bain. “That was one of the big selling points about this rig — the big tree-skidding system.”

Also impressive was the crew’s ability to set the trees by moving the semisubmersible over each well location using the “payout” system that controls chains connected to eight anchors embedded in the sea floor.

Being the first rig to perform concentric injection completions proved important to Nexen. Ultimately, it enabled the client to inject water through the completion bore and the annulus in two different zones.

“That is crucial to Buzzard, because they need water injection support for the reservoir right away,” Performance Rig Manager Ian Paterson says.

#### Creating a Performance Culture

Creating a performance culture takes more than ingenuity and hardware.



*Sedco 711 working off Ireland*





Kenny Bain, OIM, Transocean John Shaw



Jordan Forsyth, Assistant Crane Operator,  
Transocean John Shaw



James Bruce, Assistant Barge Supervisor,  
Sedco 711

It starts with a newly hired person's first day on the rig. On the *Sedco 711*, the first piece of personal-protection equipment is a fluorescent green fabric hard hat pullover to identify people on their maiden offshore hitch. This *Sedco 711* initiative has now been adopted throughout the U.K. North sea industry, through Step Change in Safety, the U.K. upstream oil and gas industry's leading safety initiative.

Then, there's a meeting with the OIM (Offshore Installation Manager) and the person's mentor, who help ensure a smooth transition to offshore life.

On the *Transocean Prospect*, everyone had to get to know one another at the same time as a brand new crew was assembled to reactivate the rig. The unit resumed operations in September 2006 after undertaking an extensive shipyard overhaul and upgrade project.

"We're multi-cultural, multi-talented. There's a good crew mixture here," says OIM Sandy Coutts.

"We've got the confidence in everyone's abilities," he adds. "We're not only learning about the rig, we're learning about working with each other, as well. We work each step of each problem to get a solution, and then we go on to the next problem. We've got massive support from Aberdeen."

### Supporting Roles

In fact, the Aberdeen offices support all 34 rigs in the company's Europe and Africa Unit, from Human Resources, Procurement, Operations, QHSE and Training to e-mail and computer support. The diversity of assistance provided by everyone at Aberdeen is impressive, whether it's finding a driller in a pinch or expanding e-mail, telephone and other communications capabilities.

Training includes well control, crane and marine simulators with state-of-the-art equipment.

Back on the *Sedco 711*, Toolpusher Kevin McPherson performed a supporting role offshore Ireland on Shell's Corrib field in the Atlantic Ocean. He was helping crews work more effectively with service partners in perforating wells during completions.

Pacing the drill floor and looking for anything "safety related," McPherson strode over to help two personnel remove an electrical line from the drill floor.

Twenty-five feet above the drill floor rotary table, a suspended blue surface tree system with a platform held two people removing the electrical line that set off "hot charges" inside perforating "guns." The guns are essentially drill pipes filled with charges that burn and explode through a 7-inch-diameter liner and into the formation of gas-bearing sands to stimulate gas flow.

The *Sedco 711*, which drilled the original well in 1998, did a well-stem test and completions on the field in 2006. The rig returned to complete the drilling and completions work on the field during the summer operations season this year, and is set for a similar schedule next year. To ensure successful operations, Brown has worked on pre-planning in Shell's offices in Aberdeen during his time off the rig.

"Pre-planning allows you to order equipment and make any changes ahead of time rather than later during the operation," he explains. "The client presents their ideas. I give feedback and then take it all back to the rig for more feedback. With dayrates where they are today, they don't need much time savings to make it worth their while."

### People Make the Rig

Brown, McPherson and approximately 95 other crew members on the *Sedco 711* take pride in going the extra mile and realizing such achievements as using the Varco casing running tool for the first time in the U.K. on a semisubmersible rig. One of the tool's advantages is that it reduces potential injury risk by using the top drive instead of tongs to make up casing joints.

But at the end of the day, it all boils down to people, not just equipment, says Simon Nixon, the Shell representative during the well-completion job on the *Sedco 711*.

"It's the people that make the rig, and the people here are fantastic," he says. "A lot of the guys have been promoted. This rig was named one of Transocean's rigs of the quarter, and myself and my back-to-back replacement scored it very highly. We don't give praise lightly; it's very well deserved."



Sedco 711



Doug Halkett  
Northern Europe  
Division Manager



Jacky Wilkie  
Accounts Payables  
Assistant



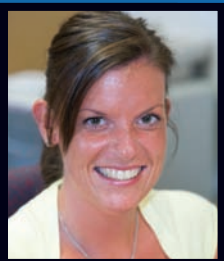
Lee McGregor  
Floorman  
Transocean John Shaw



Transocean  
John Shaw



Norman Park  
OIM  
Paul B. Loyd, Jr.



Nikki Henry  
Administrative  
Assistant



Andrew Barnes  
Floorhand  
Transocean Prospect



Transocean  
Prospect



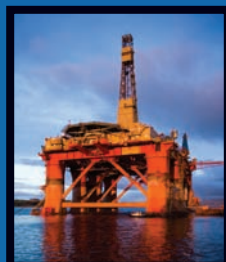
John Conner  
Roustabout  
Sedco 711



Jacqui Gordon  
Accounts Payables  
Assistant



Wayne Bradford  
HSE Advisor



Paul B. Loyd, Jr.

## Transocean FIRSTs in the U.K. North Sea and North Atlantic

**1965** - The **North Star** becomes the first jackup to work in the U.K. North Sea in more than 250 feet (76 meters) of water.

**1966** - The **Orion** is the first jackup designed to work year-round in the U.K. North Sea.

**1975** - Transocean opens the first, full-scale well-construction training facility in Aberdeen for North Sea and other personnel.

**1980** - The **Discoverer Seven Seas** drills the first well West of the Shetland Islands for BNOC.

**1987** - The **Sedco 711** and **Sedco 700** become the first semisubmersibles in the world to utilize top drives.

**1994** - The **Sovereign Explorer** becomes the first rig to drill year-round in West of the Shetland Islands.

**1996** - The **Drill Star** (now **Pride North Atlantic**), working with Conoco, becomes the first North Sea mobile offshore drilling rig to ship drill cuttings to shore for disposal.

**1996** - The **Transocean Leader** becomes the first fourth-generation semisubmersible capable of year-round operations West of Shetland Islands in over 4,000 feet (1,200 meters) of water.

**2001** - The **Sovereign Explorer** spuds the first exploration well ever drilled off the Faroe Islands, working in 3,087 feet (941 meters) of water for a subsidiary of Statoil ASA.

**2005** - The **Paul B. Loyd, Jr.** becomes the first rig to work almost continuously West of Shetlands in the North Atlantic for 10 years.

**2005** - Shell names the **Sedco 711** semisubmersible Rig of the Year.

**2006** - The **Transocean John Shaw** becomes the first semisubmersible rig to run concentric injection completions. Crews worked for Nexen on the client's Buzzard field.

**2006** - The **Sedco 714** becomes the first offshore drilling rig in the U.K. North Sea to utilize a riserless mud return system while working for Total.

★ North Europe Division and Europe and Africa Unit

■ Aberdeen Training Center, Supply Yard

● Shipyard





ALISDAIR SEMPLE, A HERIOT-WATT UNIVERSITY GRADUATE IN OCEAN SCIENCE AND TECHNOLOGY, WANTED AN OIL INDUSTRY JOB. AND AFTER SENIOR SUBSEA SUPERVISOR DAVE CARGILL OF THE *SEDCO EXPRESS* SPOKE WELL OF TRANSOCEAN, SEMPLE DECIDED TO BECOME A TRANSOCEAN RIG ENGINEER PROGRAM (REP) TRAINEE.



## Starts Now

Starting on the *Sedco 704* as a night-shift roustabout, he found the OIMs “fantastic,” the co-workers “brilliant” and the well-construction process “complex.”

“But my biggest question was: where am I going after being an REP?” said Semple at an REP induction session at the company’s Park 10 offices in Houston.

With the oil and gas industry enjoying the best business revival in more than 30 years, companies like Transocean that provide the most development are helping people find the answers.

That includes offshore where Transocean provides the industry-leading On-the-Job Training program. Also taking place is onshore development at the company’s training centers, such as the one at Aberdeen for the entire Europe and Africa Unit. And it encompasses Transocean’s U.K. North Sea “boot camp” for new personnel, including mid-career hires, who transition to working offshore two weeks on and two weeks off.

There is also the Accelerated Rig Training Program (ART) and office internships for university students. These and other people-development efforts are vital to Transocean’s part in helping the industry

add 14,000 personnel over the next five years for new-build rigs and to replace retirees.

With such changes come questions.

What makes working at Transocean unique? What is expected? How easy is it to work in different places? What’s the future for the industry?

Fortunately, Transocean leaders in HR and every other function are helping provide the answers.

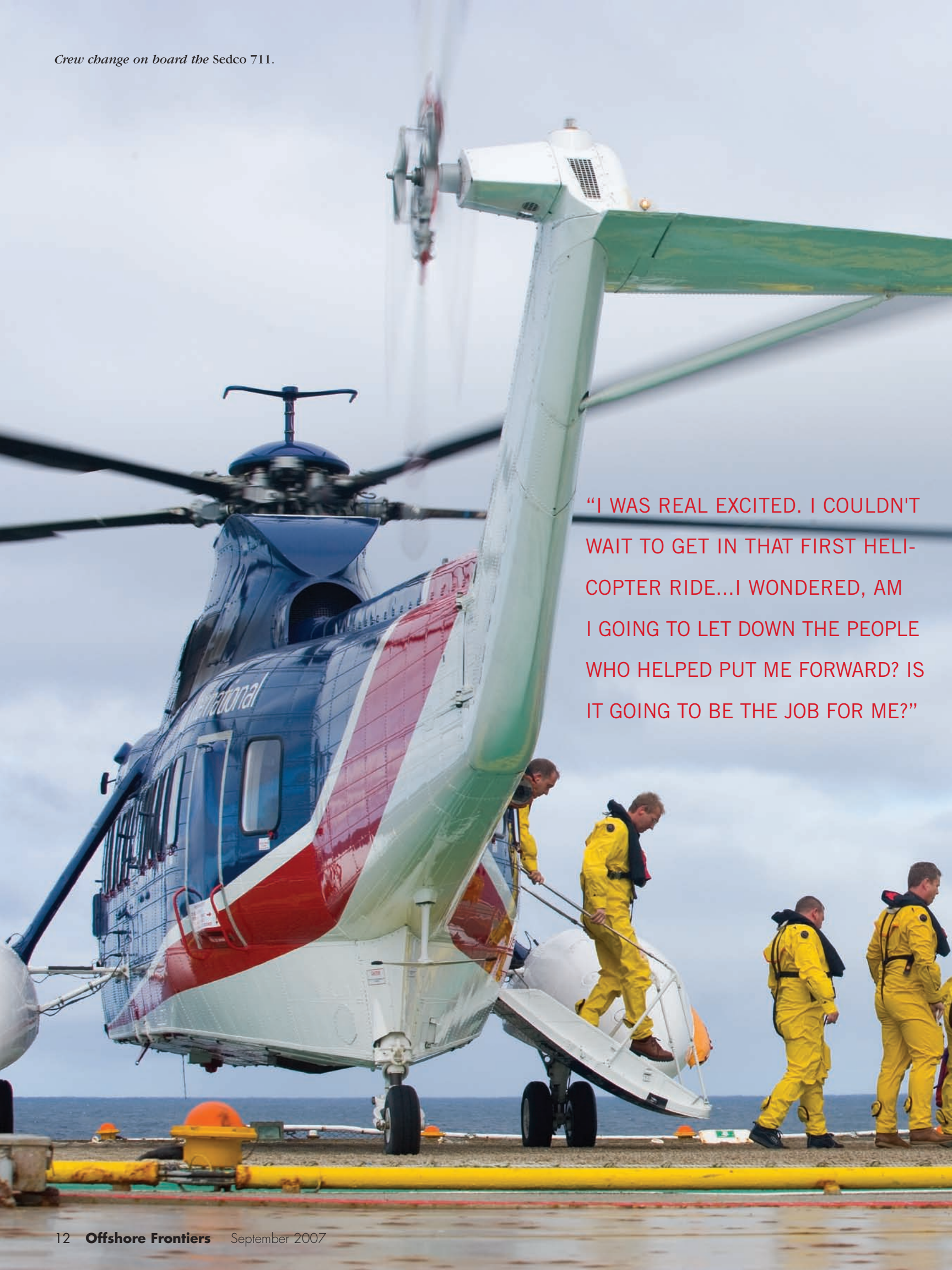
### The Future FIRST

“Almost anyone can build a rig,” Transocean Inc. President Jean Cahuzac told Semple and other REP Trainees at an introductory session in Houston. “We make the difference because of our culture, because of our people, because of our core values.”

Transocean people learn to make the right choices.

Florin Capraru had the chance to work for petroleum and oil services companies, but he chose Transocean, starting in the REP program.

“The REP program represents a great challenge giving the opportunity to learn very fast about how oil wells are drilled through ‘hands on’ experience involving



“I WAS REAL EXCITED. I COULDN'T WAIT TO GET IN THAT FIRST HELICOPTER RIDE...I WONDERED, AM I GOING TO LET DOWN THE PEOPLE WHO HELPED PUT ME FORWARD? IS IT GOING TO BE THE JOB FOR ME?”



Steve Harding, Derrickman,  
Transocean John Shaw



Florin Capraru, REP



Alisdair Semple, REP

you all the way through,” he said.

Interested in math, physics and technical drawing since he was a high school student in Romania, Capraru graduated from the University of Aberdeen with a mechanical engineering degree. Now, his sights are set on seeing the world and learning as much as possible about offshore drilling.

“Most of all, I am proud to work for the largest offshore drilling company in the world,” he says. “I am at the beginning of my career and I am aiming higher in the company.”

Stuart Smith, a *Sedco 711* Roustabout, wanted to work for Transocean after hearing about it from his dad, Ian Smith, a Barge Engineer on the *J.W. McLean*. The younger Smith graduated from the company’s U.K. boot camp, where he learned about Transocean’s core values and focus on an incident-free environment. For many people, the boot camp separates those who are ready for offshore life from those who are not. It also helps ease any concerns about a recruit’s first helicopter ride or how to complete a THINK plan.

“It never came into my head to try for any other company, because my dad works for Transocean,” Smith

said. “The boot camp seemed like the best way to get more insight into what it is like. You work quite a lot in the classroom and overall it was a good start.”

For Steve Harding, Derrickman on the *Transocean John Shaw*, earning 35% more working offshore than making cattle feed pellets onshore in the United Kingdom was a compelling attraction.

Still, he had stomach butterflies about going to sea.

“I was real excited. I couldn’t wait to get in that first helicopter ride,” he recalled. “I wondered, ‘Am I going to let down the people who helped put me forward? Is it going to be the job for me?’ ”

He found out that it was. Every day and every hitch present new challenges. Harding, who wants to “go as far as I can go,” is targeting a move to Assistant Driller.

Jules Baldacchino, a Welder on the *Sedco 711*, worked a while offshore through a personnel agency, but there were too many unknowns about the future.

“With an agency, you don’t know where you stand,” Baldacchino says, adding that with Transocean, “money-wise, you know what’s coming in and you can plan.”

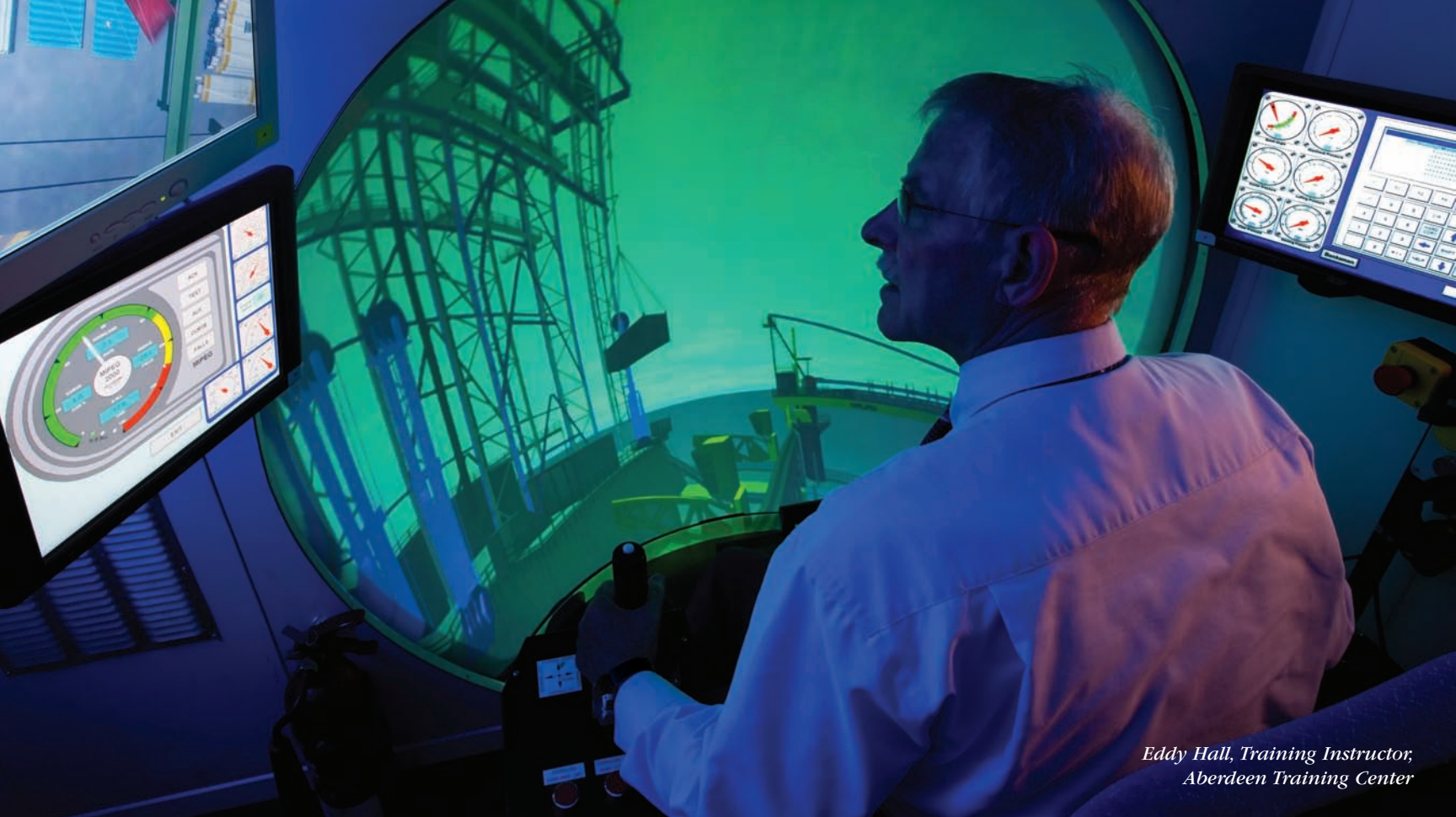
Those plans include professional advancement.





“ALMOST ANYONE CAN BUILD A RIG,”  
TRANSOCEAN PRESIDENT JEAN CAHUZAC  
TOLD SEMPLE AND OTHER REP TRAINEES  
AT AN INTRODUCTORY SESSION IN HOUSTON.  
“WE MAKE THE DIFFERENCE BECAUSE OF  
OUR CULTURE, BECAUSE OF OUR PEOPLE,  
BECAUSE OF OUR CORE VALUES.”





Eddy Hall, Training Instructor,  
Aberdeen Training Center

“Someday, maybe I’ll be a Maintenance Supervisor,” says Baldacchino. “I’ve done all the training — On-the-Job Training and HSE.”

Working offshore is a demanding job that fits people who like industrial work and can adapt to 12-hour shifts.

Garry Moir, a Motorman on the *Transocean John Shaw*, had no problem with those requirements, having previously worked as a car mechanic and then as a steam roller operator in road construction.

“The pay I was getting in the garage was terrible,” says Moir, who paid for his own offshore survival training to get a leg up on breaking into an offshore career. “When I was on the job working on the roads, we were away from home two to three weeks working 15-16 hours a day, sunup to sundown.”

Next, Moir wants to learn the subsea side of the business.

“I would like to go into the mechanical side of working with the BOP,” he says. “That’s what I like about it.”

Lee McGregor, a Floorman on the *Transocean John Shaw*, also enjoys his job but he did not realize that drilling was for him until he actually tried it.

“Life’s a learning curve, but you don’t realize how much there is to learn up there until you’re on the drill floor,” he says. “I quite enjoyed rusty-ing but I wanted to go further. When I went up to the drill floor, that’s when I decided to stay with it.”

With hard work, dedication to excellence, help from mentors and Transocean tools and resources, opportunities for success are more available than ever.

Steve Myers, EAU Career Development Manager,

notes that REPs, ARTs and mid-career hires of people from other industries are bringing in fresh blood and ideas to Transocean.

“We have had a 75% success rate with the mid-career hires,” he says. “We brought them in from other industries and trained them up.”

Leadership positions especially require people with a global perspective.

“After you do your training, you can decide if you want to work in operations, management, sales or another area,” Cahuzac added. “You will be asked to work in areas like marketing, safety or training. You may decide you want a more technical job, and you can work in engineering or project management.”

### **Don’t Forget to Have Fun**

As for the future, Cahuzac told the REP Trainees: “I believe this industry is here to last.”

Indeed, industry experts forecast that strong demand for offshore drilling rigs will extend into the next decade and beyond. But it will take more than just people to succeed; it will take the right people.

That is fine for Semple, the REP Trainee, who now had the answers to his longer-term career question.

“It depends on what we want to do,” Semple says. “If they want me to go to Asia or Nigeria, I’m quite happy to go. I’m young. There’s any number of places I can go which is great. It gives me far more opportunity to find out what I want to specialize in.”

There is... one more thing.

“My last piece of advice,” Cahuzac told the REP trainees, “is to have fun.”



*Hugh Cowley, Floorman, Sedco 711*



# ENVIRONMENTAL PERFORMANCE TAKES EVERYONE

**W**hen Steve Murray was a Ballast Control Operator on the *Sedco 706*, he knew the weather could pack a punch. But the U.K. North Sea's power stunned him on New Year's Day 1986 with waves surging over 80 feet tall.

"That was quite incredible," recalls Murray, who is now a Barge Engineer on the *Sedco 711*. "There was water coming over the helideck from the top of the waves. I've never experienced anything like that."

Well known for such grand displays, Mother Nature helps keep Transocean crews alert to protecting people and the company's nine moored semisubmersible rigs in the U.K. North Sea. But for every occasional major storm, there are dozens of daily actions that Transocean people take to better protect the environment and improve the quality of life offshore.

It's not just keeping rigs moored on location during some of the harshest gales on record that's important. It's the "little things" that make a big difference.

## **Beyond Recycling**

For example, the *Sedco 711* green card has helped increase waste segregation which reduces environmental impact. The goal: instill habits to improve environmental performance by applying the START card safety concept to the environment.

The rig sends the usual metals, cardboard, paper and plastics to shore for recycling. In addition, aerosols, glass, metals, razor blades, paper, cardboard, plastics, oily rags, printer cartridges, and even used cellular telephones make the shipment list.

Old mobile phones and printer ink cartridges go to the HSE advisor in town and the recycling center picks them up. The sales proceeds go to Oxfam, a poverty-relief charity.

Another environmental difference-maker is simply using common sense.

Like inserting recycled items into clear plastic bags — vs. black bags — for easy identification onshore.

# Transocean:

## A World of Experience

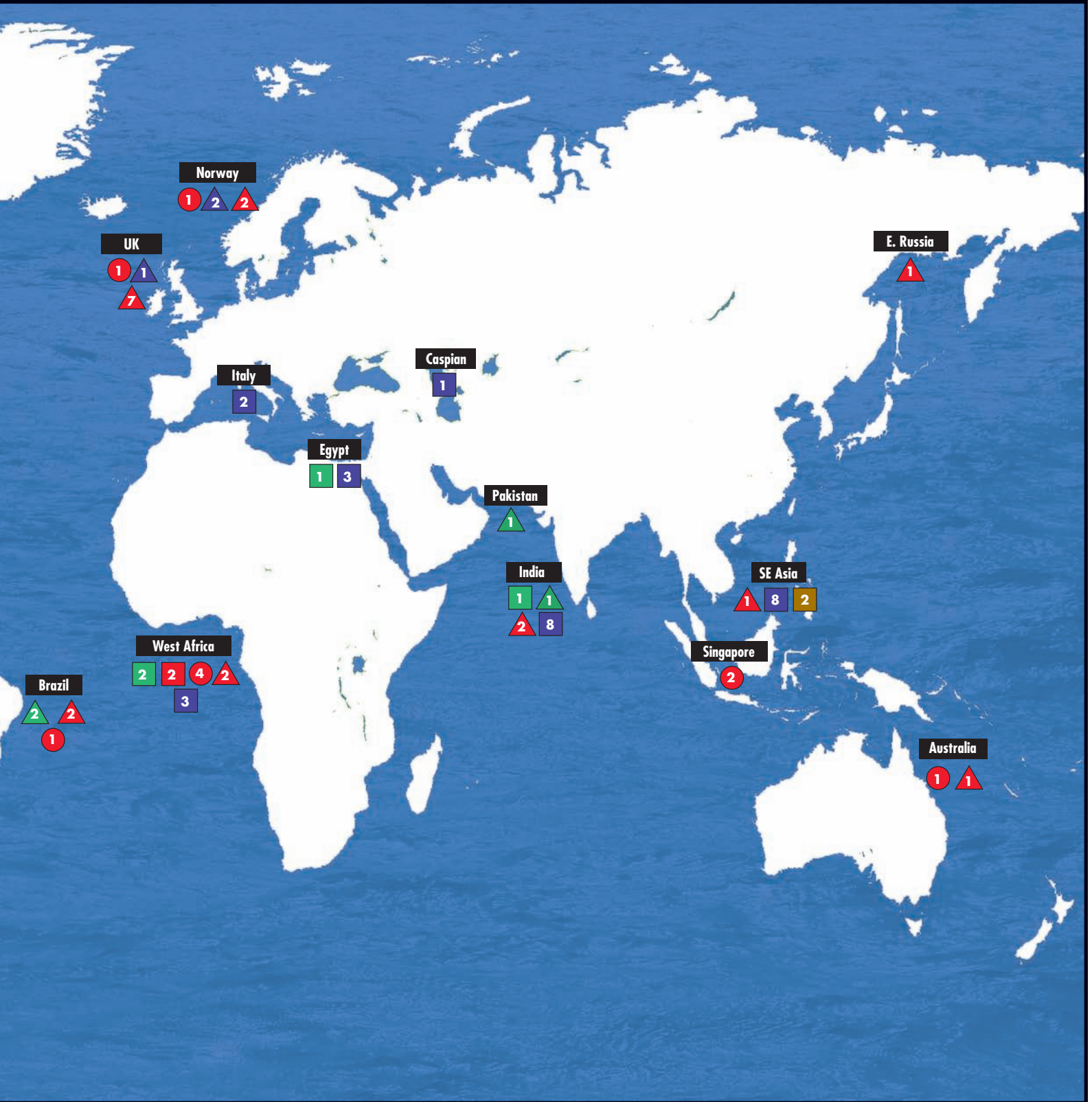
*Whether it's drilling safely  
in more than 10,000 feet  
(3,048 meters) of water  
in the U.S. Gulf of Mexico  
or in 10 feet (3 meters)  
of water in Indonesia,  
Transocean brings a world  
of technology, assets and  
over 50 years of expertise  
to get the job done right.*

*Transocean: We're never  
out of our depth.®*



 Ultra-Deepwater Drillships

 5th-Generation Deepwater Semisubmersibles



- ▲ Other Deepwater Drillships
- ▲ Other High-Specification Semisubmersibles
- ▲ Other Semisubmersibles
- Other Deepwater Semisubmersibles
- Jackups
- Inland Barges

*Transocean's diversity of people and assets is complemented by a Safety Vision of achieving an incident-free workplace. All the time, everywhere.*

*Left to right, this page:*  
*First Row: Sedco Energy, Sedco 710, Paul B. Loyd, Jr.*  
*Second Row: Shelf Explorer, Discoverer Enterprise*  
*Third Row: George H. Galloway, Deepwater Discovery*  
*Fourth Row: Discoverer Seven Seas, Jim Cunningham, Jack Bates*  
*Fifth Row: Transocean Driller, Transocean Legend, C.E. Thornton*



# TRANSOCEAN FLEET

BY TYPE AND WATER-DEPTH CAPACITY - SEPTEMBER 2007\*

TYPE AND NAME	YR. ENTERED SERVICE	WATER DEPTH CAPACITY* (IN FEET)	DRILLING DEPTH CAPACITY (IN FEET)	LOCATION	DESIGN	BOP RATING
<b>Ultra-Deepwater • 13 plus 4 newbuilds</b>						
Discoverer Clear Leader (DP Ship)	TBA	12,000	40,000	U.S. GOM	Enhanced Enterprise-Class	18 3/4 in., 15,000 psi
Discoverer Americas (DP Ship)	TBA	12,000	40,000	U.S. GOM	Enhanced Enterprise-Class	18 3/4 in., 15,000 psi
Discoverer Inspiration (DP Ship)	TBA	12,000	40,000	U.S. GOM	Enhanced Enterprise-Class	18 3/4 in., 15,000 psi
Enhanced Enterprise-class (to be named)	TBA	12,000	40,000	Angola	Enhanced Enterprise-Class	18 3/4 in., 15,000 psi
Discoverer Deep Seas (DP Ship)	2001	10,000	35,000	U.S. GOM	Discoverer Enterprise	18 3/4 in., 15,000 psi
Discoverer Enterprise (DP Ship)	1999	10,000	35,000	U.S. GOM	Discoverer Enterprise	18 3/4 in., 15,000 psi
Discoverer Spirit (DP Ship)	2000	10,000	35,000	U.S. GOM	Discoverer Enterprise	18 3/4 in., 15,000 psi
Deepwater Discovery (DP Ship)	2000	10,000	30,000	Nigeria	RBF/Samsung	18 3/4 in., 15,000 psi
Deepwater Frontier (DP Ship)	1999	10,000	30,000	India	Conoco/Reading & Bates	18 3/4 in., 15,000 psi
Deepwater Millennium (DP Ship)	1999	10,000	30,000	U.S. GOM	Conoco/Reading & Bates	18 3/4 in., 15,000 psi
Deepwater Pathfinder (DP Ship)	1998	10,000	30,000	Nigeria	Conoco/Reading & Bates	18 3/4 in., 15,000 psi
Deepwater Expedition (DP Ship)	1999	10,000	30,000	Egypt	Raum Repola Arctic	18 3/4 in., 15,000 psi
Deepwater Horizon (DP Semi)	2001	10,000	30,000	U.S. GOM	RBS-8D	18 3/4 in., 15,000 psi
Cajun Express (DP Semi)	2001	8,500	25,000	U.S. GOM	SFXpress 2000	18 3/4 in., 15,000 psi
Deepwater Nautilus (Moored Semi)	2000	8,000	25,000	U.S. GOM	RBS-8M	18 3/4 in., 15,000 psi
Sedco Energy (DP Semi)	2001	7,500	25,000	Nigeria	SFXpress 2000	18 3/4 in., 15,000 psi
Sedco Express (DP Semi)	2001	7,500	25,000	Angola	SFXpress 2000	18 3/4 in., 10,000 psi
<b>Other Deepwater • 16</b>						
Deepwater Navigator (DP Ship)	2000	7,200	25,000	Brazil	Earl & Wright Sedco 400	18 3/4 in., 15,000 psi
Discoverer 534 (DP Ship)	1975/1991	7,000	25,000	Pakistan	Sonat Discoverer	18 3/4 in., 10,000 psi
Discoverer Seven Seas (DP Ship)	1976/1997	7,000	25,000	India	Sonat Discoverer	18 3/4 in., 15,000 psi
Transocean Marianas (Moored Semi)	1998	7,000	25,000	Colombia	Sedco 700	18 3/4 in., 15,000 psi
Sedco 707 (DP Semi)	1976/1997	6,500	25,000	Brazil	Sedco 700	18 3/4 in., 15,000 psi
Sedco 700 Series (DP Semi) Upgrade I (S702)		6,500	25,000	Singapore	Sedco 700	18 3/4 in., 10,000 psi
Jack Bates (Moored Semi)	1986/1997	5,400	30,000	Australia	F&G L1020 Trendsetter	18 3/4 in., 15,000 psi
Peregrine I (DP Ship)	1982/1996	5,300	25,000	Brazil	Gusto Pelican	16 3/4 in., 10,000 psi
Sedco 709 (DP Semi)	1977/1999	5,000	25,000	Nigeria	Sedco 700	18 3/4 in., 15,000 psi
M.G. Hulme, Jr. (Moored Semi)	1983/1996	5,000	25,000	Nigeria	F&G 9500 E. Pacesetter	18 3/4 in., 15,000 psi
Transocean Richardson (Moored Semi)	1988	5,000	25,000	Angola	GVA 4500	18 3/4 in., 15,000 psi
Jim Cunningham (Moored Semi)	1982/1995	4,600	25,000	Angola	F&G 9500 E. Pacesetter	18 3/4 in., 15,000 psi
Sedco 710 (DP Semi)	1983	4,500	25,000	Brazil	Sedco 700	18 3/4 in., 10,000 psi
Transocean Rather (Moored Semi)	1988	4,500	25,000	UK North Sea	GVA 4500	18 3/4 in., 15,000 psi
Transocean Leader (Moored Semi)	1987/1997	4,500	25,000	Nor. N. Sea	Aker H-4.2	18 3/4 in., 15,000 psi
Sovereign Explorer (Moored Semi)	1984	4,500	25,000	Venezuela	GVA 4000	18 3/4 in., 15,000 psi
<b>Other High-Specification • 4</b>						
Henry B. Goodrich (Semi)	1985	2,000	30,000	En route to U.S. GoM	Sonat/Mitsui SES-5000	18 3/4 in., 15,000 psi
Paul B. Loyd, Jr. (Moored Semi)	1987	2,000	25,000	UK N. Sea	Aker H-4.2	18 3/4 in., 15,000 psi
Transocean Arctic (Moored Semi)	1986	1,650	25,000	Nor. N. Sea	Marosso 56	18 3/4 in., 15,000 psi
Polar Pioneer (Moored Semi)	1985	1,500	25,000	Nor. N. Sea	Sonat/Hitachi	18 3/4 in., 15,000 psi
<b>Other Floaters • 20</b>						
Sedco 700 (Moored Semi)	1973/1997	3,600	25,000	Cameroon	Sedco 700	18 3/4 in., 10,000 psi
Transocean Legend (Moored Semi)	1983	3,500	25,000	Sakhalin Island	Bingo 3000	18 3/4 in., 10,000 psi
Transocean Amirante (Moored Semi)	1978/1997	3,500	25,000	U.S. GOM	Aker H-3	18 3/4 in., 10,000 psi
C. Kirk Rhein, Jr. (Moored Semi)	1976/1997	3,300	25,000	India	Aker H-3	18 3/4 in., 10,000 psi
Transocean Driller (Moored Semi)	1991	3,000	25,000	Brazil	F&G L-1033 E. Pacesetter	18 3/4 in., 15,000 psi
Falcon 100 (Moored Semi)	1974/1999	2,400	25,000	U.S. GOM	F&G L 900 Pacesetter	18 3/4 in., 15,000 psi
Sedco 703 (Moored Semi)	1973/1995	2,000	25,000	Australia	Sedco 700	18 3/4 in., 10,000 psi
Sedco 711 (Moored Semi)	1982	1,800	25,000	UK N. Sea	Sedco 711	18 3/4 in., 15,000 psi
Transocean John Shaw (Moored Semi)	1982	1,800	25,000	UK N. Sea	F&G 9500 E. Pacesetter	18 3/4 in., 10,000 psi
Sedco 712 (Moored Semi)	1983	1,600	25,000	UK N. Sea	Sedco 711	18 3/4 in., 15,000 psi
Sedco 714 (Moored Semi)	1983/1997	1,600	25,000	UK N. Sea	Sedco 711	18 3/4 in., 15,000 psi
Actinia (Moored Semi)	1982	1,500	25,000	India	F&G L-1033 E. Pacesetter	18 3/4 in., 10,000 psi
Sedco 601 (Moored Semi)	1983	1,500	25,000	Vietnam	Sedco 600	18 3/4 in., 10,000 psi
Sedneth 701 (Semi)	1972/1993	1,500	25,000	Angola	Sedco 700	18 3/4 in., 10,000 psi
Transocean Winner (Moored Semi)	1983	1,500	25,000	Nor. N. Sea	GVA 4000	18 3/4 in., 15,000 psi
Transocean Searcher (Moored Semi)	1983/1988	1,500	25,000	Nor. N. Sea	Trosvik Bingo 3000	18 3/4 in., 15,000 psi
Transocean Prospect (Moored Semi)	1983/1992	1,500	25,000	UK N. Sea	Trosvik Bingo 3000	18 3/4 in., 15,000 psi
J.W. McLean (Moored Semi)	1974/1996	1,250	25,000	UK N. Sea	Zapata SS-3000	18 3/4 in., 10,000 psi
Sedco 704 (Moored Semi)	1974/1993	1,000	25,000	UK N. Sea	Sedco 700	18 3/4 in., 15,000 psi
Sedco 706 (Moored Semi) (To be upgraded)	1976/1994	1,000	25,000	En route to Singapore	Sedco 700	18 3/4 in., 10,000 psi
<b>Jackups • 25</b>						
Trident 9	1982	400	20,000	Vietnam	Modec 400-C-35	13 5/8 in., 10,000 psi
Trident 17	1983	355	25,000	Malaysia	Modec 300-C-38	13 5/8 in., 10,000 psi
Trident 20	2000	350	25,000	Caspian	Keppel Fels CS Mod. V	18 3/4 in., 15,000 psi
D.R. Stewart	1980	300	25,000	Italy	Marathon LeTourneau 116-C	13 5/8 in., 10,000 psi
George H. Galloway	1984	300	25,000	Italy	F&G L780 Model II	13 5/8 in., 10,000 psi
Harvey H. Ward	1981	300	25,000	Malaysia	F&G L780 Model II	13 5/8 in., 10,000 psi
J.T. Angel	1982	300	25,000	India	F&G L780 Model II	13 5/8 in., 10,000 psi
Randolph Yost	1979	300	25,000	India	Marathon LeTourneau 116-C	13 5/8 in., 10,000 psi
Roger W. Mowell	1982	300	25,000	Malaysia	F&G L780 Model II	13 5/8 in., 10,000 psi
Ron Tappmeyer	1978	300	25,000	India	Marathon LeTourneau 116-C	13 5/8 in., 10,000 psi
Shelf Explorer	1982	300	20,000	Malaysia	CFEM T2005-C	13 5/8 in., 10,000 psi
Interocean III	1978/1993	300	25,000	Egypt	Sonat Orion-Cantilever	13 5/8 in., 10,000 psi
Transocean Nordic	1984	300	25,000	India	CFEM T2600-1	13 5/8 in., 15,000 psi
Trident 2	1977/1985	300	25,000	India	Marathon LeTourneau 116-C	13 5/8 in., 10,000 psi
Trident 4	1980/1999	300	25,000	Nigeria	Marathon LeTourneau 116-C	13 5/8 in., 10,000 psi
Trident 6	1981	220	21,000	Vietnam	Modec 300-C-35	13 5/8 in., 10,000 psi
Trident 8	1982	300	21,000	Nigeria	Modec 300-C-35	13 5/8 in., 10,000 psi
Trident 12	1982/1992	300	25,000	India	Baker Marine BMC 300-IC	13 5/8 in., 10,000 psi
Trident 14	1982/1994	300	20,000	Angola	Baker Marine BMC 300-IC	13 5/8 in., 10,000 psi
Trident 15	1982	300	25,000	Thailand	Modec 300-C-38	13 5/8 in., 10,000 psi
Trident 16	1982	300	25,000	Thailand	Modec 300-C-38	13 5/8 in., 10,000 psi
C.E. Thornton	1974	300	25,000	India	Marathon LeTourneau 53-C	13 5/8 in., 10,000 psi
F.G. McClintock	1975	300	25,000	India	Marathon LeTourneau 53-C	13 5/8 in., 10,000 psi
Transocean Comet	1980	250	20,000	Egypt	Sonat Cantilever	13 5/8 in., 10,000 psi
Transocean Mercury	1969/1998	250	20,000	Egypt	Sonat Cantilever	13 5/8 in., 10,000 psi

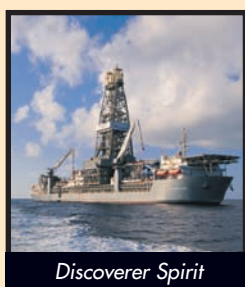
TYPE AND NAME	YR. ENTERED SERVICE	WATER DEPTH CAPACITY <sup>1</sup> (IN FEET)	DRILLING DEPTH CAPACITY (IN FEET)	LOCATION	DESIGN	BOP RATING
<b>Non-U.S. Drilling Barges • 2</b>						
Hibiscus <sup>2</sup>	1979/1993	25	16,000	Indonesia	Heavy Swamp Barge	13 5/8 in., 10,000 psi
Searex 4	1981/1989	21	25,000	Indonesia	Swamp Barge	13 5/8 in., 5,000 psi
<b>Other • 2</b>						
JOIDES Resolution <sup>3</sup> (Research Drillship)	1978	27,000	30,000	Worldwide	Earl & Wright Sedco 400	N/A
Sedco 135D	1966/77/01	600	De-watering	Brazil	Earl & Wright Sedco 135	N/A

\* As of September 2007

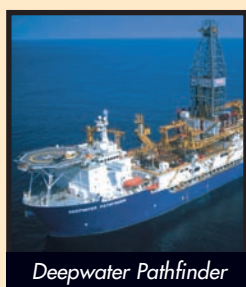
<sup>1</sup> Nominal ratings subject to limiting environmental conditions and, in some cases, extended by supplemental equipment.

<sup>2</sup> Owned by a joint venture in which the company has a 75% interest.

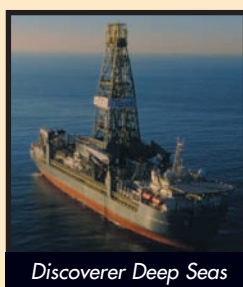
<sup>3</sup> The rig is outfitted for scientific geological coring activities and is owned by a joint venture in which a subsidiary of the company has a 50% interest.



Discoverer Spirit



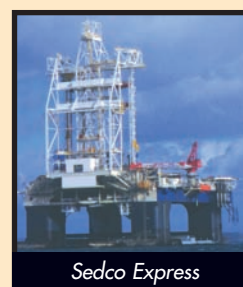
Deepwater Pathfinder



Discoverer Deep Seas



Deepwater Nautilus



Sedco Express

## TRANSOCEAN: DEEPWATER INNOVATOR

Transocean's unparalleled technical leadership in ever-greater water depths includes the:

- First offshore jackup drilling rig
- First self-propelled jackup
- First turret-moored drillship
- First dynamically positioned drillship for exploration
- First dynamically positioned semisubmersible
- First fourth-generation semisubmersible
- First rig to drill year-round in the North Sea
- First semisubmersible for sub-Arctic, year-round operations in the Barents Sea
- First semisubmersible for year-round drilling West of the Shetland Islands in more than 4,000 feet (1,219 meters) of water
- First deepwater semisubmersibles with patented Tri-Act derrick
- First ultra-deepwater drillship with patented dual-activity drilling system
- First drillship capable of working in 10,000 feet (3,048 meters) of water

## DRILLING RECORDS

Transocean holds 19 of the past 23 world records for drilling in the deepest waters. Our ultra-deepwater drillship *Discoverer Deep Seas* set the current world water-depth drilling record in 10,011 feet (3,051 meters) of water in the U.S. Gulf of Mexico (GoM) working for Chevron.

Other world records include:

- The deepest well ever drilled offshore at 34,189 feet (9,189 meters) by the drillship *Discoverer Spirit* while working for Chevron, Anadarko Petroleum Company, BHP Billiton and Nexen Petroleum USA, Inc.
- The world water-depth record for a moored rig in 8,951 feet (2,728 meters) of water by the *Deepwater Nautilus* in the U.S. GoM while working for Shell.
- The world's deepest subsea well completed in 8,960 feet (2,733 meters) of water by the *Deepwater Millennium* in the U.S. GoM for Anadarko.
- The *Deepwater Nautilus* set the deepest subsea tree in 7,570 feet (2,307 meters) of water by a moored semisubmersible rig in the U.S. GoM for Shell.





*Left to right, this page:*  
*First Row:* Polar Pioneer, Deepwater Millennium  
*Second Row:* Falcon 100, Sedco 707, D.R. Stewart  
*Third Row:* Trident 15, Discoverer 534, Deepwater Horizon  
*Fourth Row:* Transocean Nordic, Deepwater Frontier, Transocean Comet  
*Fifth Row:* Transocean John Shaw, Harvey H. Ward, Trident 9



Paul McGregor, Assistant Driller, Sedco 711

Every day on the *Sedco 711* starts with two START card tours: one person focusing on safety and one on the environment, also known as the Green Card tour.

“Unless you put them in clear plastic bags, they won’t go to segregation,” says Alan Caldwell, Asset Manager for the *Paul B. Loyd, Jr.* semisubmersible rig, who previously served in the same role on the *Sedco 711*. “No one is going to open the bags to see what is inside. Instead, they’ll just send them to the landfill right away.”

### Green Cards, Teams

Every day on the *Sedco 711* starts with two START card tours: one person focusing on safety and one on the environment, also known as the Green Card tour.

“They’re looking at everything from our drains and isolation valves, basic things,” Caldwell explains. “You can’t look at your own area. You have to observe in an area where you don’t work so that we get a cross section of the rig.”

Like other rigs, a Green Team comprised of members from the OIM to the Camp Boss and the RSTC, come up with new ways to maintain good waste segregation and reduce environmental impact.

One example is the friendly reminder cards that stewards leave in rooms whenever they find aluminum cans in the trash bin, instead of being recycled.

As such habits become ingrained, environmental performance ratchets up.

Jim Findlay, *Sedco 711* Maintenance Supervisor, ties in environmental performance with more efficient operations. Because his rig works primarily in workover and completions mode vs. drilling, there is less need to run machinery at higher levels, which saves on higher emissions and wear and tear on equipment.

“You’re not running the mud pumps, and you can maybe switch to run only one (power) engine at a time instead of two or three,” he notes. “You’re not nearly as hard on your machinery.”

### Cuttings Edge

In addition, Transocean has helped pioneer environmentally protective technology such as drill cuttings management, receiving plaudits from clients.

In fact, the *Sedco 714* became the first offshore drilling rig in the U.K. North Sea to utilize an AGR Subsea RMR™ (Riserless Mud Return) system, saving clients time and money.

While working on Total’s Jura West 3/15-10 prospect, *Sedco 714* crews used the RMR™ technology to re-circulate and reuse drilling fluids in a top-hole system, resulting in a 3.5-day savings to the operator, compared with offset wells.

That equates to more than a million dollars of time savings for the client and the greater benefit of reducing personnel risk by eliminating over-the-side work and running riser, says Neil Clyne, Operations Manager for Transocean in the United Kingdom.

On Nexen’s Buzzard field, *Transocean John Shaw*

Dmitrij "Dima" Grevcov,  
Assistant Derrickman,  
Sedco 711



crews had similar goals with a cuttings-injection system.

Instead of the standard process of having up to 70 large container skips on deck for sending well cuttings to shore for processing, the cuttings were ground, "slurrified" and stored in specially modified column tanks. Next, they were exported to a supply vessel, for transport to the Buzzard Installation where they were pumped down a specially drilled well.

The system freed up most of the pipe deck space, enhanced rig stability and cut costs and the environmental impact of the "skip-and-ship" process. It also reduced potential injury exposure by not having to use the crane operator and two roustabouts, which in turn saves on engine emissions.

"It's environmentally protective, and it significantly reduces the amount of time and risk to personnel from lifting and handling cuttings containers," says *Transocean John Shaw* Performance Rig Manager Ian Paterson.

Protecting people is a major part of environmental performance.

For example, *Transocean John Shaw* Barge Supervisor Brian Taylor demonstrates the Skagit quick-release winch system that can payout 500 feet of anchor chain in two minutes. Such fast action at the push of a few buttons can move the rig nimbly into the wind, in case of an emergency such as an H<sub>2</sub>S gas release, keeping people out of harm's way.

### All the Time, Everywhere

Roustabout Garry Moir appreciates the value of using safety "all the time" and the colors personality process as well on the *Transocean John Shaw*.

By noting the primary and a secondary color to identify a co-worker's dominant personality traits, notes Moir, you can look at a person's hard hat and "know what a person is like before you even speak to him."

Another effort, the Personal Responsibility for Safety program, has been rolled out across the U.K. fleet to help head off incidents before they can occur.

"Anywhere you are, you've got to walk around with your eyes up in the air, you can't be looking down, says Lee McGregor, Floorman on the *Transocean John Shaw*. "The first few days I was on the rig, I was walking and looking down, and they were away lifting a container, and I was told to stand back. Safety is definitely a key priority on the rig."

Regularly, THINK plans, START cards and FOCUS improvements also aid personnel in the pursuit of an incident-free workplace. But *Sedco 711* crews take further steps that include bridging the gap between contractors and the core crews.

### Bridging the Gap

When it comes to safety, bridging that gap has never been more important, because service partners represent 40%

of the total population on the *Sedco 711*.

One answer: a daily safety sheet that displays the logos of all the companies working on the rig along with key safety metrics and improvement opportunities.

It's a key part of morning teleconference meetings between the rig and the onshore management and support team, covering a variety of comments from START observation cards, safety metrics and THINK plans.

Leaders, such as former *Sedco 711* OIM Alan Trevorrow (now on the *Sedco 714*), note that the logos show that safety is a team effort, but the key is intervention. When each improvement opportunity gets addressed the day it arises, confidence, credibility and morale grow stronger.

There are only two options: put closure on a safety problem or shut it down, says Trevorrow.

So, daily, the *Sedco 711* RSTC uses a safety tracker fed into each department. The idea is that when a supervisor writes an improvement opportunity on his night shift, it is fixed by the time he gets back on the next shift.

Helping out with the safety sheet are BCOs (Ballast Control Operators) who count and type in START cards. Drillers also have an area to complete.

Then, the sheet goes to all the clients and all the supervisors of the rig and the subcontractors. It gives them an opportunity to provide feedback and ask questions, again, closing the loop between the client, the subcontractors and Transocean.

Whether it's a safety improvement idea or better protecting the environment, people at Transocean remain focused on developing new opportunities to learn.

"We are moving forward with a view to constant improvement," says George Donald, Rig Manager of the *Sedco 712*, which had zero TRIR as of July 26, 2007, despite many rig moves and related challenges.

And, of course, Mother Nature, herself, keeps everyone on their toes, as Steve Murray, the *Sedco 711* Barge Engineer, knows from the New Year's Day storm.

"I was hoping to get the T-shirt that says, "I survived the 100-year wave," he says. "But that storm was only the 10-year wave, so there is more to come."

## Leading the Way

# Transocean:

## *Bill Clements: Deep Roots*

This is the second in a multi-part series about how Transocean Inc. and its predecessor companies launched the most innovative drilling rigs and set by far the most deepwater drilling records. This article about William P. Clements, Jr., founder of SEDCO (Southeastern Drilling Company), is based on interviews, including one with Guy Cantwell of *Offshore Frontiers*, and another with Jay Schempf, author of a new book titled *Pioneering Offshore: The Early Years*. For a pdf copy of this article, please contact Guy Cantwell at [gcantwell@mail.deepwater.com](mailto:gcantwell@mail.deepwater.com).

### THE HANDS.

They say you can tell a lot about someone by looking at their shoes, but for insight about Gov. William P. Clements, Jr., look at his hands.

Gnarled but steady at 90, they are the hands of an experienced roughneck.

In the late 1930s, Clements fell in love with oil rigs and went on to become a deepwater pioneer, CEO of one of the world's largest offshore drilling contractors, U.S. Deputy Secretary of Energy and twice Governor of Texas.

Speaking in his trademark Northeast Texas drawl, Clements examines his fingers at the Cumberland School Building, SEDCO's former worldwide headquarters in downtown Dallas, Texas.

"You can look at them, and you know they took their beating," he says about his work on the drill floor.

But Clements never had a lost-time accident, a real achievement considering the long hours of "slinging chain" to make up and break down drillpipe.

He kept his nose to the grindstone and out of small south Texas bars near the land rigs. Sometimes, he worked double, eight-hour shifts when a co-worker failed to show for work. And he kept to his word, basing it on core values that include integrity.

Where did he get those traits, which are still part of Transocean's core values?

"It has a core answer," he says, smiling. "My family. My mother and father were strict disciplinarians, and the paddle was not an unknown object in our house. It was applied vigorously and frequently."



Growing up in the Highland Park neighborhood of Dallas, Texas, the young Bill Clements achieved the highest rank of the Boy Scouts of America, Eagle Scout, in just 14 months at the age of 13.

"Those core values — I'm talking about in the Boy Scout creed and laws and the way it runs its business — those core values are life values, and I'm a strong believer in that," he says. "So between my family and between my Boy Scout background, my *modus operandi* was always on the basis of strict integrity, and we operated (SEDCO) that way."

But first, he had to get the company started.

"I wanted to be a drilling contractor," Clements recalls. "I didn't know exactly how I was going to get there, but that's what I wanted to do."

He also wanted to help his family, which had fallen on hard times during the Great Depression.

So, he switched from university engineering studies to the drilling business, first on land rigs, then at Oilwell Supply Company in positions up to South Texas Division Manager.

When the chance arose to purchase two land rigs with partner Ike LaRue, Sr. and financed by attorney Toddie Lee Wynne, Clements had found a way to become a drilling contractor. So, in 1947, Southeastern Drilling Company began operations with two well-used land rigs. The next decade saw the purchase of eight nearly new land rigs picked up by Clements for dimes on the dollar in Venezuela in the deal of a lifetime.

After experimenting with post-type swamp barges in Texas and Louisiana, the company began integrated land operations overseas in the Middle East, South America



Governor Clements meets with the Boy Scouts, February 10, 1979.



Inauguration day, January 16, 1979.

Photos this page courtesy of Texas State Library & Archives Commission.

and Asia. “We had 10,000 employees in the Persian Gulf area alone for several years,” Clements recalls. “We were not only doing the drilling side but we were also doing the logistical side with boats and barges on a commercial basis and in addition we had a pipeline division that laid major pipelines through the whole Middle East — in Iran, Iraq and Saudi Arabia.”

And SEDCO had big-name clients, including BP, Royal Dutch Shell, Saudi Arabia and Iran.

Long-term contracts were a key to growth. The length of the deals was an advantage, and “hold harmless” clauses shielded the company from in-country risks which clients bore.

“It is the only thing that makes sense,” Clements notes. “The dayrates had to represent a cash flow on a four-year payout basis. I never shall forget it; it really took place in The Hague with Royal Dutch Shell. They really understood that they couldn’t expect private enterprise to make that kind of investment without some kind of a reasonable return.”

In 1964, deepwater was considered 135 feet, the maximum water depth of the most capable rig on the job: the *Sedco 135*. It cost less than \$9 million to construct and earned \$8,000 a day, and SEDCO built 11 more versions. The *Sedco 135-D* still operates today in the Transocean fleet as a de-watering unit in Brazil.

Five years later, oil was discovered in the U.K. North Sea, and SEDCO responded with the *Sedco 700*. Transocean still operates that rig in West Africa.

“We had both jackups and semis, and also platforms, we had all three,” Clements remembers about those days. “We were by far the biggest operator in the North Sea.”

Transocean’s worldwide fleet today has nine *Sedco 700*-series rigs, a real testament to the vision of Clements and company.

SEDCO also pioneered nationalization programs, sending talented people from outside the United States to the University of Texas and University of Oklahoma and then into operations worldwide.

“They were fast learners and they made good employees,” Clements said. “And I’m talking up into

supervisors, superintendent positions.”

Although his travel schedule was grueling, with extensive trips to the Far East, Europe and the Middle East, Clements enjoyed the “solicitation” part of his job.

Also rewarding was building a culture of excellence and leadership in technology.

So, SEDCO acquired the engineering firms of Baylor Company of Houston and Earl & Wright of San Francisco. With the best engineering personnel, SEDCO pioneered equipment from dynamic positioning to subsea controls to top drives and electric brakes for drawworks.

“That Baylor brake, as an example, was an absolute standard,” Clements notes. “That was just something that everybody had to have.”

All the technology and talent enabled the company to work in deeper and deeper water.

Dillard Hammett, a former SEDCO Officer and Board of Directors member, recalls that management “saw a vision, and said, ‘Hey, the money is to support these oil companies in their deepwater operations and have the equipment to do it.’ ”

That equipment would eventually take the form of rigs such as the *Sedco 445*, now the *Deepwater Navigator*, which constructed its first well in 1972 as the first full-scale oil and gas drillship equipped with DP (dynamic positioning).

Clements retired in 1984 after Schlumberger Ltd. acquired SEDCO and merged it with Forex Neptune to form Sedco Forex, which merged with Transocean in 1999.

Looking ahead, it’s the same core values that kept SEDCO growing that keep Clements busy today. He manages ranching interests and philanthropic endeavors through the Clements Foundation.

Looking back, Clements recalls with fondness the strong sense of camaraderie inside his company and good industry relations, proud never to have had a legal dispute with a client or another drilling contractor.

“For the many years that I was involved in it, it was a pleasure to be a part of that group of drilling contractors — highly competitive but always on the basis of integrity and friendship,” Clements concludes, gesturing.

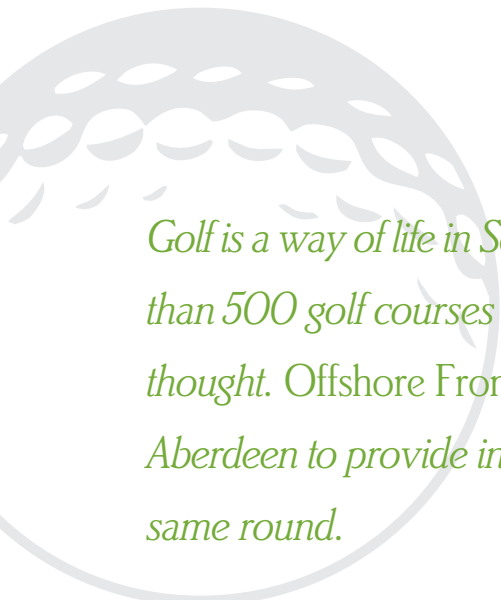
With those hands.



Euan Rennie,  
Malcolm Allan,  
Dave McEwen and  
Andy Leslie  
hit the links  
every chance  
they get.



# Golf in the U.K.: Not Just a Sport



*Golf is a way of life in Scotland. After all, this is where it started 600 years ago. With more than 500 golf courses to choose from, it's easy to see how the game is never far from thought. Offshore Frontiers checked in with some seasoned Transocean golfers in Aberdeen to provide insight into this game they all agree can elate and deflate all in the same round.*

### **Meet the Players**

- Jay Richardson, Technical Field Support Manager for the Europe and Africa Business Unit, has been playing golf for more than 30 years and has a handicap of 15.
- Euan Rennie, North Europe Division Controller, has been a golfer for more than 20 years and sports a handicap of 12.
- Malcolm Allan, Senior Subsea Superintendent, has played golf for 37 years and has an impressive handicap of 4.
- Andy Leslie, Performance Rig Manager, is a 20-year golfer with a 16 handicap.
- Dave McEwen, Employee Services Manager, has been on the links for the past 30 years. He's working hard to get his 12 handicap down to a single digit.

### **Why do you play golf?**

**Richardson:** I find it relaxing and enjoyable. It is good exercise out in the open air and is a sociable sport that can be played anywhere in the world at all skill levels.

**Rennie:** A variety of reasons. It's enjoyable and good exercise. It's competitive and frustrating at the same time, but generally because it's good fun.

**Allan:** Enjoyment (sometimes).

**Leslie:** For enjoyment and to keep active.

**McEwen:** Golf is a great way to keep fit if you do not go to a gym or do any other type of physical activity. It's said that during a round of golf you walk just over three miles and in this country we do not have the luxury of golf carts; we have to walk. It's also a good way to take your mind off work and meet people.

### **Which U.K. course is your favorite?**

**Richardson:** There are so many, but for scenery Gleneagles.

**Rennie:** The course where I am a member — Newburgh on Ythan. It's a links course and is part of a nature reserve, so there's plenty of wildlife on show for free. It only has one tree on it, which means there are fewer obstacles to hit. I've played on many courses in northeast Scotland. One other course that stands out in my memory is Kingsbarnes in Fife — a real test of golf.

**Allan:** Kings Course Gleneagles. The whole set up is

brehtaking and the scenery is the best you can get. If you can't relax there, then you will not relax on any course.

**Leslie:** St. Andrews Old Course. The feeling when you are standing on the first tee about to tee off is unbelievable, even at 7 o'clock in the morning.

**McEwen:** I have played many great courses in the U.K. and coming from Scotland we have the best courses in the British Isles. My favourite course is Kingsbarnes, which is a links course situated about eight miles from St. Andrews.

### **What was the best golf outing you ever had?**

**Richardson:** Probably Loch Lomond with the scenery, company and feeling of playing one of the best courses in Scotland. I also remember playing in a Pro CelAm with literally thousands of spectators on the course watching your every shot. What a buzz!

**Rennie:** I enjoy most golf outings I attend. The Transocean tournaments at Piperdam are always enjoyable, mostly due to the course being accommodating and the big attendance from on and offshore. The golfing "banter" on these days is usually very enjoyable, especially when the scores are counted. "Bandits" used to be found in the hills waiting to ambush someone, but I find them in the Operations and Aberdeen Field Support departments quite regularly. They are easy to spot in the rain as they wear sombreros. (Rennie explains — the golfing term "bandit" refers to a golfer who claims a handicap of say 18 but can actually play to around 10 or less on a good day — and therefore win tournaments.) It's a good natured bit of leg-pulling that's often found at the "19th hole."

**Allan:** Portugal. Great score, beautiful day, good golfing partners. It was just the boys on a seven-day tour. There was total satisfaction as all the boys could play and the humour was second to none. Of course, the weather helped also.

**Leslie:** The Transocean tournament held at Piperdam every year is always an enjoyable event as you get a chance to catch up with a lot of old friends and colleagues





Jay Richardson addresses the ball during a round at the Cruden Bay golf course.

you have worked with over the years.

**McEwen:** The best golf outing I ever had was to play 18 holes with Jean Van De Velde, a French golfer who is on the European Tour. He is famous for a couple of reasons — 1. He is probably the best French golfer to come around in a long time, and 2. He famously lost the 1999 British Open to a friend of mine, Paul Lawrie, by taking a 7 at the last hole to get into a play-off, which Paul won.

#### Have you ever hit a hole in one?

**Richardson:** Unfortunately not, but I have accompanied several people who have!

**Rennie:** Not yet.

**Allan:** Yes, five.

**Leslie:** No.

**McEwen:** I have been lucky to have had two holes in one. The first was the 17th hole at my old home course, Murcar Links in Aberdeen, and the second one was the 7th hole at Ballybunion, which is the most famous course in the Republic of Ireland.

#### Any additional observations from the 19th hole?

**Richardson:** Golf is one of the few sports that can be played by men and women alike and, with the handicapping system, all have a chance to win. It's truly international and can be a great ice breaker in doing business or whilst on holiday. Remember, a bad day on the golf course is better than a good day at the office!

**Rennie:** Golf's a good game because you play against your opponents and the course. The course almost always wins. Sometimes you win. There's no quick fix to golf so you always have to work at it. It can elate and deflate you in the same round.

**Allan:** Golf is part of my life and before I got married I told my then future wife that she could never change my love for golf and if she ever tried, then she would be out of the bed and my clubs would be in. After 22 years of happy marriage, I have only wakened twice to find my clubs in the bed, so not a bad girl I found after all.

**Leslie:** The biggest challenge playing golf is being able to concentrate. If you have things on your mind, then to be able to play well and enjoy yourself, you have to be able to block them from your mind.

**McEwen:** They say golf is a great leveler. It's the only sport where you can tee up with professionals in pro/am tournaments and get the same score at any hole. You can be a world beater one day and the next you hit the ball all over the course.



## Golfing at Piperdam

There's no denying the social aspect of playing a round of golf. Since 2003, Transocean U.K. employees, past and present, have gathered during the summer to hit the links at Piperdam. Attendees also get a chance to go fishing and clay pigeon shooting at the sporting resort located just south of Aberdeen.

"We started our annual outings as a way to get employees from every rig in the North Sea together at least once a year with guys they either work with or had worked with over the years on different rigs," says Dave McEwen, event organizer.

The attendance has steadily increased each year from about 30 golfing and 12 enjoying the other sports to this summer, which saw the largest turnout yet — 165 played golf, 45 fished and 50 went shooting over two days.

The gathering also serves another purpose — to raise funds for a local charity decided upon by the rig personnel. More than £20,000 (USD\$41,000) have been raised over the years to support children's charities, the Royal Lifeboat Institute, Guide Dogs for the Blind, the Children's Ward at Nine Wells Hospital in Dundee and Bobath Scotland, a group that looks after children with cerebral palsy.

This year, Transocean personnel raised £6,200 (USD\$12,760). "That amount will be topped up to £10,000 by the company thanks to the generosity of Northern Europe Division Manager Doug Halkett and our Unit VP Arnaud Bobillier, with the money going to the Foundation of Goodness, a charity in Sri Lanka, and the David Donaldson Trust," McEwen reports.

The Foundation of Goodness was set up after the tsunami in December 2005 to help school children with books, clothing and shoes. The David Donaldson Trust was set up by his wife, Pauline, to help the relatives of people waiting on heart transplants in Glasgow Royal Infirmary. David, a Transocean employee, was given a new heart eight years ago. Sadly, he passed away last year. "We thought that this was an excellent way of remembering a good friend," McEwen says.

In her thank-you letter to Transocean, Pauline recalled how much David loved these outings as well. "He lived life to the fullest and would have enjoyed the banter that you guys are all having today. Although I remember him saying that trying to get you all on the bus home on time was a task!"

Linda Alsop (front, red shirt) made her 50th birthday a memorable one. Ian Paterson and his son, David, joined her on the 400-kilometer bike ride on the Nile River.



When Linda Alsop turned 50 years old, she had two choices. She could take the low road and complain about reaching 50 or she could take the high road and do something positive to celebrate being 50. It just so happens that the high road she took was next to the Nile River.

## Cycling on the Nile for Alzheimer's

Linda Alsop, Operations secretary, U.K., was joined by Transocean colleague Ian Paterson, Performance Rig Manager, *Transocean John Shaw*, and his son, David, on the 2007 Nile Bike Ride held in February. The five-day, 400-kilometer (250-mile) challenge is held every two years and attracts cyclists of all skill levels to raise funds for their favorite charities. The Transocean team chose the Alzheimer's Society of the United Kingdom in memory of Alsop's father who contracted the disease whilst in his 50s. The trio raised £14,119 (about \$29,000 USD) with the help of many Transocean colleagues.

The adventure started in London where Alsop and the Patersons met up with 42 other Alzheimer's Society U.K. team members. The team flew to Cairo, Egypt, then on to Luxor where bikes were supplied. "All we had to do was bring the gel seats and cycle helmets," Paterson reports.

The challenge consisted of biking 112 kilometers (70 miles) each day across desert paths and past historic sites such as the Temple of Karnak, the largest ancient religious site in the world. Both Alsop and Paterson had no training before the ride. "I had not been on a bike since I was a child," Alsop says. Paterson had run a marathon in London back in 2000, but nothing formal since then. "I found the heat the biggest problem, especially on the second day which was largely through desert areas," Paterson relates. And David, well he was 17 at the time and had no problem completing the ride. In fact, he's now headed to Limestone College in South Carolina, U.S., on a soccer scholarship.

Alsop handled the heat okay, but experienced a malady of a different kind. "I expected to be saddle sore and went prepared with the gel saddle and the best padded cycling shorts that I could find. I never could have imagined how sore it would be to sit on the bike, day after day, mile after mile. That was definitely my greatest challenge," she says.

Quitting was never an option for Alsop. "My

mother made a comment when I suggested the trip about it perhaps being a rather stupid idea at my age. Failure, therefore, was not an option. I had a point to prove!

"The bike ride was unlike anything I had ever done before," she says. "It was fascinating to see how a group of strangers were put into a situation and pulled together to help each other complete the task."

Paterson agrees. "The thing I liked most was how everyone just worked together to help each other through to the end. It was just tremendous how people helped others with encouragement and stayed with them to get up hills and through the tough bits." The ride was such an inspiration that Paterson used a photo of all the team members in a slide presentation during a *John Shaw* Safety Shutdown meeting. The slide had the words, "Help Each Other: Ordinary people working together can achieve extraordinary things."

Alsop says the trip was a world away from anything she had ever experienced. "My lasting memory will be of happy, excited children without shoes and chewing on pieces of raw sugar cane from the fields, shouting welcome from the side of the road," she says, painting the picture. "Compared to our children back home, who have so much and still find so much time to be discontented with their lot, it was very refreshing."

Will Alsop saddle up again? "I think that it is fairly safe to say that I am unlikely to be on a bike again," she says, but, "I am considering the possibility of going to Peru next year to trek the Inca Trail to Machu Picchu with a couple of the girls I met in Egypt. The trip will raise funds for Bobath Scotland, an organization that supports cerebral palsy, which their grandson/nephew suffers from."

As for Paterson, he and his daughter, Mairi, plan to join the Vietnam to Cambodia Bike Ride in February 2008 to raise funds for the Alzheimer's Society. To make a donation, go to [www.justgiving.com/mairiandian](http://www.justgiving.com/mairiandian).



# Connecting with Customers

## **Sedco 700**

Hess wishes to express our appreciation to all associated team members for outstanding performance in the completion of Ceiba 34. The operation was completed under budget and ahead of schedule with no safety or environmental incidents.

We acknowledge the teamwork and effort by all our Transocean and Baker personnel along with all our service and logistics support. As indicated, the NPT (non-productive time) was 13.5%. If we discount the 16 hours wait-on-boats time which was beyond operational control, the NPT has been reduced to 9.9% which would place this performance in upper quartile for subsea completion standard.

We would also like to point out that this achievement coincides with the completion of one-year-free-of-recordable-incident operation to achieve a current standard of 0 TRIR on a yearly basis on the part of Transocean S700 operation.

We recognize this type of performance only occurs with the dedicated effort of many. Please accept and pass on our sincere appreciation for the results of these efforts to all associated with our operation.

*Thank you,  
John Brokaw  
Drilling Superintendent  
Amerada Hess Equatorial  
Guinea, Inc.*

## **Sedco 703**

I would like to take the opportunity to congratulate you and all the members of your team on an outstanding performance on our recent campaign on the North West Shelf. The last few wells were drilled at almost technical limit with very little downtime. In addition to the cost and time performance, I was

particularly pleased in how we managed to continually improve our HSE performance throughout the campaign, resulting in us finishing with 112 days consecutive performance without any injury including a first-aid case. Indeed, we finished this campaign without any incident of any description for the last 72 days. This is quite an incredible performance and takes considerable effort and dedication from everyone in your team.

Please pass on my appreciation to every member of the S703 team, particularly the crew and their supervisors. It was a pleasure to work with all of you and we look forward to continuing our successful relationship with you all again in the second half of 2007.

*Yours sincerely,  
Kevin Gallagher  
Director, Drilling and Completions  
Woodside*

## **Trident 16**

A most excellent performance on the 12-1/4-inch Batch of PAWL. The batch was completed in a safe and professional manner. The standard set for the 12-1/4-inch hole section is 4.5 hours. The first well was completed in 10 hours which is above the standard but is the first well in the batch. The standard does not make allowances for this well which usually has more planned work such as TDS change, BOP handling, BHA handling and MWD installation. I will look at ways to incorporate this into the standard so we have a better measure for the first well. Of the remaining wells, two met the standard and one exceeded the standard.

This can only be accomplished if you have a well prepared plan in place, execute to plan and learn from each execution. I would like to thank you and the crews for

a big effort in planning and preparation which resulted in safe and efficient execution. Keep up the excellent work.

*Barry Carlson  
Drilling Superintendent  
Chevron Thailand Exploration  
and Production Co. Ltd*

## **Sedco 714**

Now that the 714 has completed its operations for BG and moved to another operator I would like to personally thank the Rig Manager(s), and the crews of the 714 for carrying out a successful operational campaign for BG Group. During 2005, the 714 worked on Cromarty (drill and complete), May (exploration), and North West Seymour (re-entry and complete). More significant than the technical achievements, the entire campaign was carried out safely.

The IRR for the entire period of almost a year was zero, with no LTAs, RWCs, MTCs or harm to the environment.

All in all, the rig had an excellent year from BG's perspective and performed very well during some difficult operational situations. We look forward to working with Transocean again in 2006 on the 704, and will work with Transocean to maintain this impressive HSSE record.

*Many thanks,  
Glenn Smith  
Well Engineering Manager  
BG Group*

## **Transocean John Shaw**

The John Shaw departed from the Buzzard field on June 12, 2007 after completion of the final operations on the eight water-injection wells required for pressure support on the Buzzard field.

This marks the end of a major piece of work on the Buzzard

project which took just over 500 days to complete and at the last count was 10.2 days ahead of scheduled AFE times and under budget by just over 3 million pounds sterling, a variance of under 3% against AFE. This is a significant achievement that you can all be very proud of. More importantly, this was achieved without major injury to any of the personnel involved in delivering these wells.

On behalf of the Nexen U.K. management team, I would personally like to thank everyone who has contributed to the success of this campaign, and I am sure there are many more than just those I have included on the distribution list. Can I please ask that you pass on this message to all of the other people that I may have missed, who have also played an important part in this excellent piece of work.

There have been many challenges along the way and the design of the concentric injectors was an industry-first to the best of my knowledge. This was a major step to take at the outset of the project, and shows the level of commitment that so many people have demonstrated in the delivery of this phase of the Buzzard project.

Once again, thank you all for your work, determination and the professional approach that you have all shown throughout the project. Well done and please continue to work safely!

*Regards,*

*Colin Gibson*

*Drilling and Completions Manager  
Nexen Petroleum U.K. Ltd*

### **Deepwater Frontier**

The management of Reliance Industries Limited recognizes the efficient, incident-free and safe performance of the personnel in drilling well No. KG-D6-MB1 to its target depth.

As a token of the appreciation of the efforts, RIL management is pleased to announce a one-time award payment of US \$15,000 for

installation of a 46-inch LCD/Plasma TV with Home Theatre System in the public space at the rig DWF. We believe the above gesture will motivate all personnel to work efficiently and complete the future wells in optimum time.

*Best wishes and good luck to all,  
P.M. Suresh*

*Vice President, Procurement and  
Contract  
Reliance*

### **Deepwater Pathfinder**

I would like to personally acknowledge the entire offshore team for the challenge, assessment, action plan and subsequent drilling of the 8-1/2-inch hole section. I have attached a poster which can be put on the galley screen offshore.

The performance speaks for itself — 2,086 feet of 8-1/2-inch hole in 24 hours is a huge step change for the *Deepwater Pathfinder*. Our average in previous campaigns has been on the order of 800 to 1,200 feet in any 24-hour period. This is a whopping 73% improvement. Congratulations to everyone for this performance. This was truly a team effort.

However, I am more impressed by the behaviours surrounding this step-change in performance than the actual performance. The team challenge, the risk assessments and the action plan which brought it all together must be commended.

### *The first challenge*

Connection times were averaging 26-30 minutes. The team came together to discuss this in an open, honest and focused manner. Below is what we challenged with the potential process change.

What we achieve is an actual average connection times of 14-16 minutes. This resulted in 5-1/2 hours of extra drilling time which is superb. Thanks for everyone that was involved in the piece of work and the successful implementation. Of course there is no

blind procedure that is reliable for every well and one must let the hole dictate the actual operational procedures on the day. Well done!

### *Challenge number 2*

Due to all the expensive equipment incorporated into our BHA (notably rotary steerable), the mud system in use and the ability of our rig, we challenged the hole cleaning ability. The hole angle was in excess of 43 degrees and so the challenge and execution were critical to our success. RPM of the drill string was increased from 100 rpm to 130+ in this section. ROP was increased to the rate that the lithology would allow from a pre-drill plan 60 to 80 feet per hour. The overbalance on the well was also reduced from the pre-drill plan. Hole condition monitoring was an essential mitigation to all of the above and the offshore personnel really worked at this aspect of the well.

We achieved a hole which is the best that I have seen since arriving in Nigeria. We have drilled other high-angle wells and never have we seen one as in gauge and resistance-free as this hole. Our average well-bore diameter was 8.54 inches with no washout over the sand intervals which was not seen either in the previous Bobo well nor the 12-1/4-inch section of this well. We also did not register any overpulls which we have seen on every high-angle well to date, whether 12-1/4-inch diameter or 8-1/2-inch diameter. This is absolutely stunning.

Thanks again to everyone for the effort which led to the step change in performance. Everyone can be proud of this achievement as it was a real team effort which transcended many different teams and companies.

*Kind regards,*

*Mark Ratchinsky*

*Rig Superintendent,*

*Transocean Deepwater Pathfinder  
SNEPCO*

# Corporate Report

## Looking into the future with Steve Newman, Transocean

*This January 2007 Drilling Contractor story by Linda Hsieh, associate editor, is reprinted with the publication's permission.*



STEVE NEWMAN is executive vice president and chief operating officer of Transocean Inc.

**DC:** In 5-10 years when we're designing and building new rigs, what capabilities will they need in order to develop hydrocarbons in the deepwaters and ultra-deepwaters that operators are targeting?

**Newman:** There are a few key issues. One, load path will become increasingly important. Because of the deeper waters, more complex well trajectories and casing strings will be needed to complete those wells. Two, the industry needs more efficient fluid handling for the complex mud systems and completion fluids systems we're using to drill wells. The ability to efficiently handle 2 and maybe 3 fluid systems will become important.

A third issue that's been on the backburner but is becoming increasingly important is well control. We're quite capable of handling 15k psi, but operators have expressed interest in drilling 20k psi wells, and the industry's not ready for that yet.

**DC:** How soon will we need the well control equipment to handle the 20k-30k?

**Newman:** I believe those wells would be drilled now if the pressure control equipment was there. I see it happening in a 3-year time frame.

**DC:** Do you think the lack of that



Transocean is working on key issues such as load path and mud systems to make sure its rigs, such as the *Deepwater Millennium*, meet operators' needs in the future.

equipment is holding the industry back?

**Newman:** I wouldn't say it's holding us back because all capable rigs are fully deployed. We don't have drilling rigs sitting idle because there is no 20k psi equipment available. However, when that equipment does become available, rigs will be re-allocated from existing 15k-psi operations to frontier 20k-psi operations.

**DC:** What areas of innovation do drilling contractors need to focus on to reduce costs and increase efficiency for operators?

**Newman:** There are always ongoing efforts to reduce costs, particularly on the critical path of drilling operations. A prime example is Transocean's joint effort with Aker Kvaerner Maritime Hydraulics to develop the modular derrick drilling machine. Top drive component failure has been a significant part of our downtime experience, so we're trying to make the new unit not only more robust to prevent failure but also to make it modular so that when a failure does occur, its impact on the critical path of the operation is reduced.

Dual activity brought critical

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**Q:** How soon will we need 20,000 psi well control equipment?

**A:** Those wells would be drilled now if the equipment was there.

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path improvements to the overall process. Now we're applying the lessons of dual activity on non-dual activity rigs. For example, we've installed auxiliary stations on the *Express-class* rigs to replicate the efficiencies of dual activity. With rigs like the *Transocean Rather* and *Transocean Richardson*, we're capable of outfitting them with the ability to run subsea trees over the side rather than through the moon pool, freeing the well-center up for critical path activities. There are many such examples where our employees worldwide look at everyday operations to figure out how to take simple routine activities off of the critical path.

**DC:** How long has Transocean been working on the modular derrick drilling machine?

**Newman:** Since 2004, and we expect to have a prototype by the fourth quarter of 2007 that we can subject to rigorous factory tests. We're also considering putting it in service on one of our existing rigs in 2008 to test it under true operating conditions.

**DC:** Do you think that modular concept will become more widespread in our equipment in the future?

**Newman:** I believe so. Right now, a failure in the main shaft or main bearing on a top drive means there's no alternative other than laying down the top drive, sending it out for repair and sending it back out to the rig. This translates into about a week of downtime, as a minimum. With our modular approach, even a critical component like a main shaft or a main bearing can be replaced on the rig with the unit in the derrick,

which takes something that costs the well construction process a week down to about 12 hours. It's a dramatic improvement in mitigating the impact of a failure.

I think we will continue to look at different equipment with that modular concept to facilitate rapid change-out. The BOP control system is a system we'd like to do that with, and maybe that's part of the next wave of rig equipment we will look at.

**DC:** How do you think dynamic positioning capabilities will factor into future rigs?

**Newman:** I think it's less about DP capabilities and more about power management. None of the incidents in the past 3 years when a rig lost position has been related to the DP system. Half of them are failures in power generation or power management. Transocean is working closely with Siemens to incorporate into our rigs the technology that utility power distribution companies use to manage their grids, which makes their grids more flexible, more robust and less prone to outages.

For our existing DP installations, Transocean has developed an advanced generator protection system, which has several key objectives. One is to prevent component failure in any aspect of the power-generating or power distribution system. The second is to detect failures when they do occur, and the third is to mitigate the consequences of those failures. We plan to put the system on our existing DP installations, as opportunities present themselves over the next few years.

**DC:** Do you think the increase of

automation technologies will lead to a clear trend in smaller rigs that don't have to accommodate as many crew members?

**Newman:** No, because the size of the rig is not about the accommodations block. The size of the rig is dependent on the load path and the deck load capability of the rig. As long as operators are drilling wells in 10,000 ft. of water and 20,000 to 30,000 ft. below the mudline with 8 or 12 casing strings, the industry will need big rigs capable of supporting the magnitude of the logistics involved.

**DC:** Then how do you think automation will affect rigs of the future?

**Newman:** Automation will have a bigger impact on the skill set of the people we need. In the early days when we had mechanical relays in the electrical systems, we needed workers who could trace out wiring diagrams. We don't have mechanical relays anymore. We have PLCs, programmable logical controllers, so we need workers who can manipulate the programs to operate that equipment. On the drilling side, rough-necks used to wield 20-lb. sledge hammers. Today, we need rough-necks who can operate highly automated drillfloor equipment. It's a different skill set.

**DC:** Transocean has been setting deepwater drilling records from 1,969 ft. in 1974 to 10,011 ft. in 2003. What kind of depth record do you imagine Transocean might be setting 10 years from now, in 2016?

**Newman:** That's an interesting question. When we were building rigs in the mid-'70s, such as the *Discoverer Seven Seas*, people thought we were crazy for building a rig that drills in anything deeper than 500 ft. or 800 ft. of water. The attitude was: We don't even know if oil is out there, and even if it is, we don't think anybody will ever want to go out there and get it.

Flash forward to late 2003

and we've drilled in over 10,000 ft. of water. Now we're building rigs capable of drilling in 12,000 ft. water depths, and we will continue to push those boundaries. What will the boundary look like in 2016? I can't say for sure. In 2016, we may be using rigs for purposes other than oil and gas exploration. We may be looking at manganese nodules, hydrates, or other seafloor mineral excavation.

**DC:** What will be the biggest limiting factors keeping us from going deeper?

**Newman:** Equipment will play a significant role. To enable a more efficient transition into deeper waters, we're looking at the riser string. In 10,000 ft. of water, the demands on the riser string are enormous. Even though riser joints are outfitted with buoyancy to minimize their weight in water, they still have tremendous mass. On some rigs, 15k-psi choke and kill lines contribute an immense amount of weight and mass to the riser joints. We're looking at composite auxiliary lines to reduce the mass of the riser in water and to reduce the weight of the riser while it's sitting on the deck in between wells.

Additionally, the reliability of BOP control systems must improve. Pulling a BOP in 7,000 ft. of water to repair a component failure can cost 7 or 10 days. Obviously, the costs increase even more when you're operating in 15,000 ft. of water.

**DC:** Will there be any differences in the way rigs are maintained a decade from now?

**Newman:** I don't foresee significant changes. Transocean's approach has always been to maintain our equipment in service, and I think that will continue to be our main premise.

**DC:** Looking over the past decade, what are 1 or 2 milestones the industry has set in terms of rig design?

**Newman:** Dual activity was clearly

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**Q:** What are the key issues in future rig design?

**A:** Load path, mud systems, well control equipment.

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a major milestone. Everything else is evolutionary. For example, there's a greater predominance of top drive drilling, there are higher-pressure mud systems to improve bottom-hole hydraulics, and there's bigger solids control equipment — but I would characterize all of those as evolutionary.

**DC:** What do you think of coiled tubing and how will it factor into the industry's future?

**Newman:** The real near-term application for coiled tubing is a concept of through-tubing rotary drilling where we go back to clients' existing reservoirs with existing completions. To re-complete the well, historically the existing completion had to be pulled. Through-tubing rotary drilling would allow the existing completion to be left in the ground, a window to be cut in the existing tubing and casing, then sidetrack the well to another part of the reservoir. That's the approach I see.

**DC:** What are some interesting rig technologies coming out and how do you think they will benefit the development of hydrocarbons in the future?

**Newman:** I'm not sure I would characterize it as new rig technology, but I would look at the overall process. Considering intelligent downhole tools and the sophisticated control systems on the rig, currently there isn't a great means for connecting everything together. Rotary steerable offer the ability to accurately pinpoint the bottomhole location, and in many instances, we still rely on mud-pulse telemetry to get the downhole information to the driller who's operating the blocks

and the top drive and to the directional driller handling the downhole tools.

If the industry could figure out how to increase the data transmission rate and improve the reliability and application of that equipment offshore to provide the geoscientist with a full suite of real-time information about downhole conditions, that will significantly improve the overall outcome.

Another aspect of improved process is better pressure control. In deepwater, the pore pressure gradient and the frac pressure gradient are so close together, there's very little margin for error. Oftentimes you find yourself either solving lost circulation problems because you've exceeded the frac pressure gradient, or solving well control problems because you've gone below the pore pressure gradient. That results in a tremendous amount of nonproductive time for the client.

The industry has spent a lot of time looking at managed pressure drilling; our own version of that is continuous annular pressure management, or CAPM, where we create the ability to far more accurately control the downhole pressure environment so you're able to walk that narrow line between the 2 gradients. You eliminate casing strings, nonproductive time and reservoir damage and get better wells and productivity and access to reservoirs that are currently not drillable.

*Steve Newman is executive vice president and chief operating officer of Transocean Inc. His duties include leading Transocean's operations, engineering and supply chain management functions.*



# Measuring Our Success

## Transocean Safety Performance YTD August 2007

By Unit	TRIR*
Asia and Pacific Unit	0.64
Europe and Africa Unit	1.11
North and South America Unit	1.03
<b>Company Total</b>	<b>0.89</b>

\*Total Recordable Incident Rate per 200,000 hours worked.

## Transocean Zero SICs (Serious Injury Cases)

Ten rigs have achieved four or more consecutive years without a Serious Injury Case as of the following dates:

### 4 Years Consecutive:

*Deepwater Horizon* as of February 28, 2007  
*Deepwater Nautilus* as of August 10, 2007  
*Sedco 601* as of January 17, 2007

### More than 4 years Consecutive:

*Harvey H. Ward* since July 20, 2002  
*Sedco 135-D* since 2001  
*Sedneth 701* since 2001  
*Transocean Leader* since 2002  
*Transocean Marianas* since July 20, 2002  
*Transocean Mercury* since December 22, 2002  
*Trident 17* since February 27, 2002

## Transocean Fleet Utilization 2007

By Rig Type	Utilization		
	First Quarter	Second Quarter	Six Months Ended June 30, 2007
High-Specification Floaters			
Ultra-Deepwater Floaters	97%	98%	97%
Other Deepwater Floaters	77%	82%	79%
Other High-Specification Floaters	99%	99%	99%
Total High-Specification Floaters	87%	90%	89%
Other Floaters	94%	98%	96%
Jackups	83%	86%	84%
Other Rigs	100%	100%	100%
<b>Total Drilling Fleet</b>	<b>88%</b>	<b>91%</b>	<b>90%</b>

## Meeting the Expectation — ZERO

The following 35 rigs achieved Zero TRIR\* for the seven months ended August 31, 2007:

### Asia and Pacific Unit:

*Actinia*  
*C.E. Thornton*  
*C. Kirk Rhein, Jr.*  
*F.G. McClintock*  
*Harvey H. Ward*  
*Randolph Yost*  
*Roger W. Mowell*  
*Searex 4*  
*Sedco 703*  
*Shelf Explorer*  
*Transocean Nordic*  
*Trident 2*  
*Trident 12*  
*Trident 15*  
*Trident 17*

### Europe and Africa Unit:

*George H. Galloway*  
*Interocean III*  
*Jim Cunningham*  
*J.W. McLean*  
*M.G. Hulme, Jr.*  
*Sedco 709*  
*Sedco 712*  
*Sedneth 701*  
*Transocean Comet*  
*Transocean Mercury*  
*Transocean Searcher*  
*Trident 4*  
*Trident 8*

### North and South America Unit:

*Cajun Express*  
*Discoverer Deep Seas*  
*Henry Goodrich*  
*JOIDES Resolution*  
*Sedco 135-D*  
*Sedco 710*  
*Transocean Marianas*

\*Total Recordable Incident Rate per 200,000 hours worked.

## Transocean Stock Price Performance

December 29, 2006 to September 14, 2007



*The price of Transocean common stock closed at \$106.16 on September 14, 2007, compared with \$80.89 on December 29, 2006. The company's stock trades under the symbol RIG on the New York Stock Exchange.*

# Make the Right Move

When it comes to your career you want to make the right move. At Transocean you can do just that.

We are the largest and most experienced offshore driller worldwide, with industry-leading positions in ultra-deepwater and harsh-environment drilling. At Transocean you can work with some of the most advanced rigs in operation in the world, operations that set records in technical firsts, efficiency and safety.

We also have some of the most experienced people in the industry so you will have the opportunity to learn from and share with some of the best minds anywhere. And we offer competitive salaries, bonuses, benefits, equal time off (usually 28 days off for 28 days worked offshore) and the industry's best on-the-job training program.

Visit the Career Opportunities section of our website at [www.deepwater.com](http://www.deepwater.com) for a list of job openings and to contact us about working with Transocean.





[www.deepwater.com](http://www.deepwater.com)

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