

# rigamarole

volume 19 number 1



spring 2005

## **2 A fleet to match the markets**

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**10 Pemex goes deeper**

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**18 Amerada Hess' George Sandison**

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**30 Rigging up the Vanguard**

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A publication for the people, customers,  
suppliers and friends of

**Diamond Offshore Drilling**





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## 2 A Fleet To Match the Markets

Why upgrading offshore drilling rigs makes sense

## 8 Pemex Goes Deeper

Target: Four million barrels of crude oil production per day and 100% reserve replacement by 2006. Pemex calls on Diamond Offshore to help

## 18 Straight Talk

Amerada Hess' George Sandison offers candid insights about industry trends and what matters most in the relationship between producers and offshore contractors

## 22 Drill and Go

Employing surface blowout prevention technology, Diamond Offshore has drilled 11 wells in deep water for Unocal in Indonesia in about one-third the time and at a cost savings ranging from \$5 to \$10 million per well

## 26 Chasing Lightning

Utilizing communications technology to save money and downtime

## 30 Rigging Up The Vanguard

How long-term vision and a strategy of opportunistic rig purchases is paying off for Diamond Offshore in Norway's North Sea

## 32 Ruminations

## 33 Facets

News and views from Diamond Offshore

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**Larry Dickerson**  
PRESIDENT AND CHIEF OPERATING OFFICER

# Welcome.

**I'm very glad to send you a revived and revamped *Rigamarole*. This magazine is about sharing the many advances taking place in the offshore industry and in **Diamond Offshore**, and the achievements of the many men and women who, every day, work toward and support our quest for offshore energy.**

**A**lthough we have deferred issuance of our magazine for the past two years, we have never reduced our commitment to our customers and employees. We have continued to modernize and expand our fleet, to establish positions in new markets and to explore and employ advanced technologies. We have also set new standards in safety, achieved record drilling depths and reduced drilling times—all while protecting the environment. It is more than past time that we resume highlighting these achievements in *RIGAMAROLE*.

In that regard, in the summer of 2003 we completed a major upgrade of the now 5<sup>th</sup> Generation semisubmersible *Ocean Rover*, and the rig, which is capable of drilling in up to 7,500 ft. of water, began a long-running and successful exploration program for our customer in Malaysia. We concluded our current fleet modernization program earlier this year when the newly cantilevered 350-ft. jack-up, the *Ocean Titan*, joined its sister ship, the *Ocean Tower*, at work in the U.S. Gulf of Mexico. Today, all 12 of our domestic jack-up rigs are busy in the U.S. Gulf on largely natural gas driven programs. Additionally, we continued our strategy of opportunistic rig purchases with

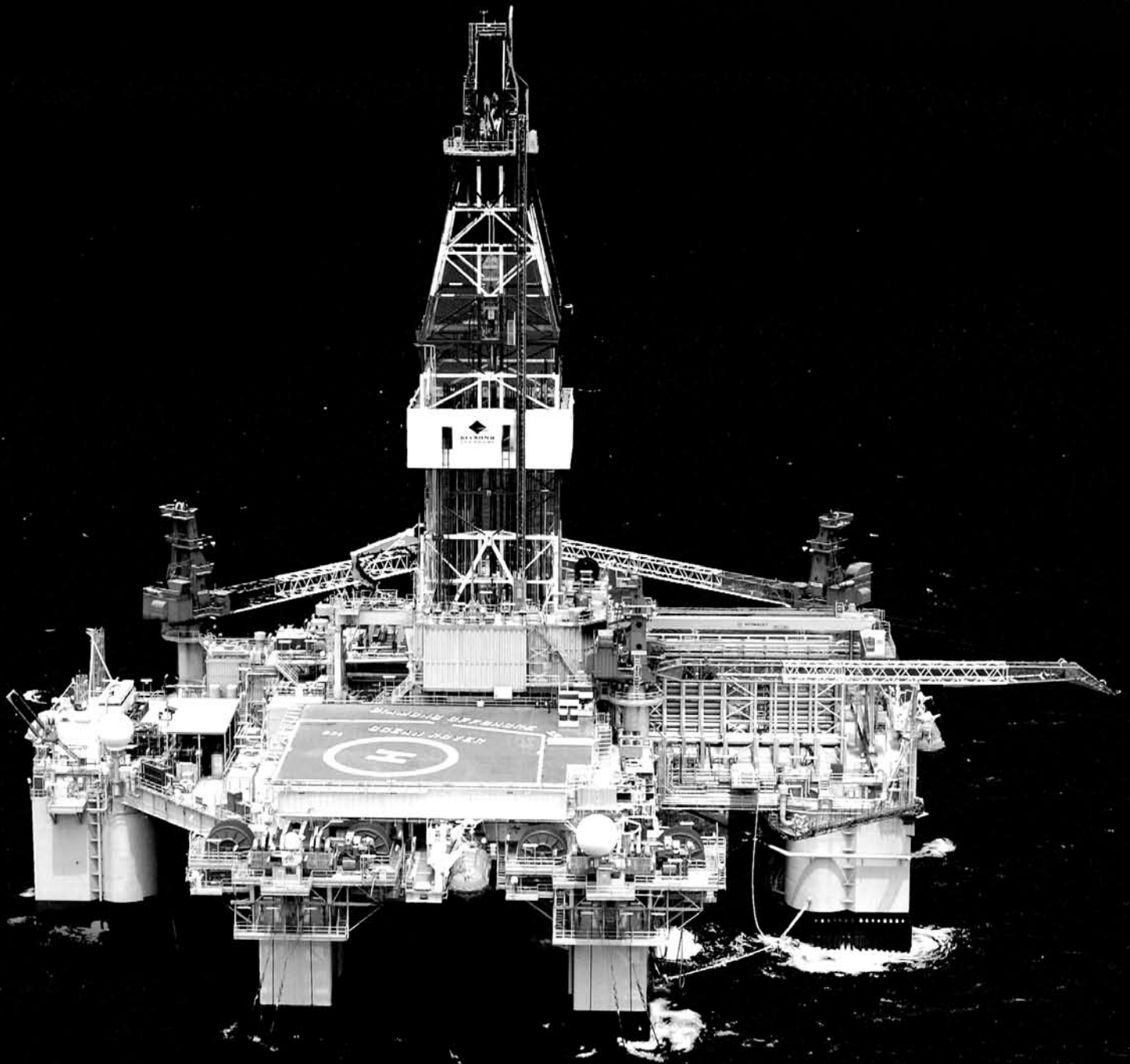
the addition of two large semisubmersibles to our active fleet—the *Ocean Vanguard* in the North Sea and the *Ocean Patriot* in the Southern Hemisphere. Each has long-term commitments and is working in Norway and Australia, respectively.

We have also moved in and out of several new countries including Ecuador and South Africa. And we have returned to or established new positions in such countries as India, Bangladesh, Korea and Mexico. The Company now has four rigs operating in the Gulf waters of Mexico, and we have established a long term base in Ciudad del Carmen, in the state of Tabasco to support those operations. We believe that there is tremendous long term potential in this region and are pleased to assist our customer, Pemex, in its efforts to expand the energy resources of a fast growing nation.

Articles about all of these activities are included in the following pages. We hope you enjoy them and that they will stimulate your continued interest in *RIGAMAROLE*. Your comments are certainly of interest to us, and we look forward to receiving anything you might like to add our discussion on offshore issues. Drop us a line at: [rigs@dodi.com](mailto:rigs@dodi.com).

# **A fleet to match** **the markets**

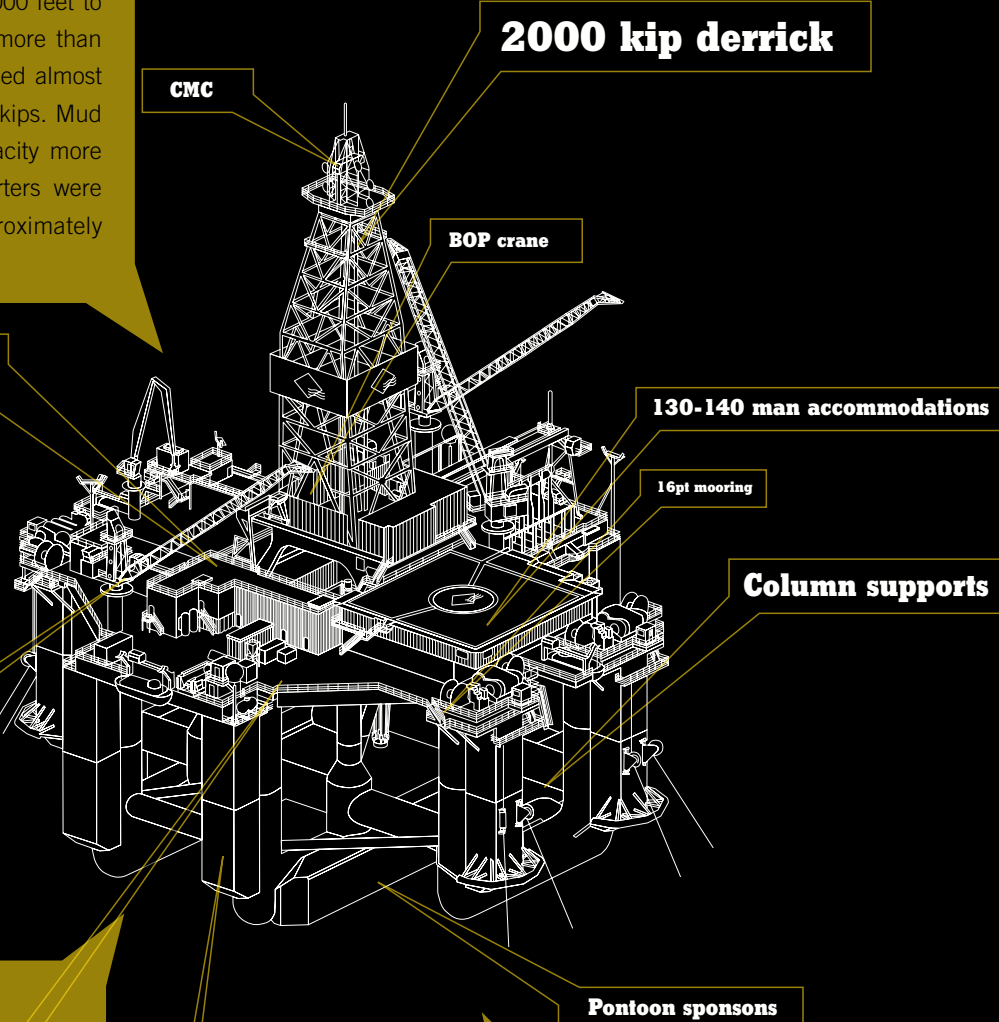
**Why upgrading offshore drilling rigs makes sense**



## [Re]building the *Baroness*

Originally built in 1973, Diamond Offshore's *Ocean Baroness* and *Ocean Rover* were upgraded to 5th Generation status beginning with the *Baroness* in late 2000. Both upgrades were completed in about 20 months and came in under budget estimates.

Water depth capabilities for both rigs increased from 1,500 feet to over 7,000 feet. Drilling depth was taken from 20,000 feet to 35,000 feet. Variable deck loads more than doubled, and riser tension increased almost five times, from 640 kips to 3,600 kips. Mud and completion fluid storage capacity more than quadrupled. And crew quarters were expanded to accommodate approximately 50% more personnel.



## Built to go deep

- 7,000 ft.+ water depth
- VDL—5,500 LT
- 3,600 KIPS riser tensioners
- 4 1/2 in. ID choke and kill lines
- 60 in. ID rotary / diverter
- MUX BOP control system
- 15 KSI BOPs

## Larger sponsons

## Increased deck area

## Why Victory Class rigs?

“We are talking about maximizing the full potential of our fleet,” says Rodney Eads, Senior Vice President of Operations, “in order to provide customers the technical capabilities they require to operate in deep water and drill to deeper total depths. The Victory Class rigs were chosen because they have a unique geometry. They consist of four pontoons, four horizontal cross-tubes, diagonal braces, 12 columns, and a cruciform-shaped deck. They were built with thicker and higher quality materials, and expansive deck space. In other words, they were built with a good bit of reserve strength, possess sufficient size, and have excellent fatigue and motion characteristics. This makes them ideal candidates for the generational adaptability of the kind Diamond Offshore has been doing.”

# W

**e always seem to want the next new thing**, yet we often complain that “they just don’t build ‘em like they used to.” With offshore drilling rigs, much as with ancient sailing ships, the age of a rig is only one determinant of lifespan, and not necessarily even the best. The original quality that went into the rig’s design and fabrication, along with maintenance and the unit’s current technical capabilities are all critical factors.

With the demand for oil growing, the pressure to find more hydrocarbons is rising correspondingly. Furthermore, as depletion of the world’s more accessible reservoirs accelerates, so does the importance of efficiency in finding and developing new reserves, especially in deeper waters. With exploration accounting for as much as 25% of the cost of a barrel of oil, energy companies are looking for ways to lower their discovery and development costs.

Diamond Offshore made a decision in the mid-1990s to be aggressive about getting the most out of the Company’s drilling fleet. “We sensed then that there was a severe shortage of deepwater drilling rigs,” says Larry Dickerson, Diamond Offshore’s President and Chief Operating Officer. “So we decided that we could upgrade certain rigs within our fleet to add deepwater capacity.”

“The human element is this Company’s greatest competitive edge. We know how to find, train, and keep good people. After that, the focus comes down to our fleet. How flexible and efficient are the rigs? How deep we can go? How quickly we can deploy a unit? How competitive are our drilling rates?”

The majority of Diamond Offshore’s fleet was built through acquisitions and mergers with other drillers. In some cases, like the *Ocean Vanguard* and the *Ocean Patriot*, the Company purchased rigs on a stand-alone basis. While many of these units were built in the ’70s and ’80s, Diamond Offshore believed that because of their structural integrity they would be excellent candidates for upgrading.

“By comparison, *The Surprise* is a somewhat aged man-o-war. Am I not correct?”

“*The Surprise* is not old. No one would call her old. She has a bluff bow, lovely lines.

She’s a fine seabird—weatherly, stiff, and fast. Very fast if she’s well handled.

No, she’s not old. She’s in her prime.”

—from *Master and Commander, The Far Side of the World*  
based on the books by Patrick O’Brian

So, the Company began a process of modernizing the fleet on a rig-by-rig basis, as their pedigree and condition dictated. “From a cost and a time standpoint, we believed that 4th and even 5th Generation capabilities could be achieved for about one-half the cost of a new-build rig, and that the rigs could be operational in less than half the time.”

“We are talking about maximizing the full potential of our fleet,” explains Rodney Eads, Senior Vice President of Operations, “in order to provide customers the technical capabilities they require to operate in deep water and drill to deeper total depths.”

### **Begin with the best**

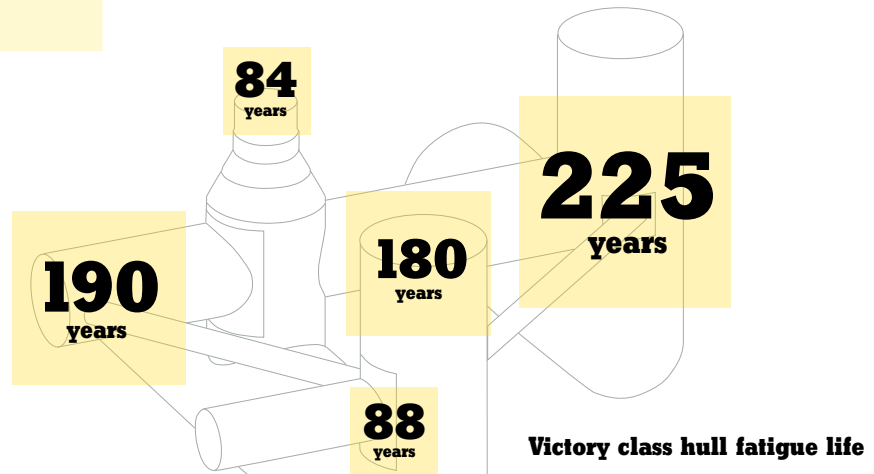
Between 1996 and 2004, Diamond Offshore conducted major upgrades on more than one third of the Company’s rigs. As a result, Diamond Offshore has gone from a fleet of predominantly intermediate depth semisubmersibles to having the second largest deepwater fleet in the industry.

The Company’s 14 jackup units were also modernized. Seventy-five percent can now drill in 300 feet of water or greater, and all but one have cantilever packages. Both the *Ocean Titan* and *Ocean Tower*, which operate in water depths up to 350 feet, were converted from independent-leg slot rigs to independent-leg cantilever rigs.

Of the semi-submersible upgrades, over half involved enhancing Victory Class rigs built in the 1970s.

The Victory Class rigs were chosen because, says Eads, “Victory Class rigs have a unique geometry. They consist of four pontoons, four horizontal cross-tubes, diagonal braces, 12 columns, and a cruciform-shaped deck. They were built with thicker and higher quality materials, and expansive deck space. In other words, they were built with a good bit of reserve strength, possess sufficient size, and have excellent fatigue and motion characteristics. This makes them ideal candidates for the generational adaptability of the kind Diamond Offshore has been doing.

The age of an offshore drilling rig is only one determinant of lifespan, and not necessarily even the best. The original quality that went into the rig's design and fabrication, along with maintenance and the unit's current technical capabilities are all critical factors. Diamond Offshore made a decision in the mid-1990s to be aggressive about getting the most out of the Company's drilling fleet, electing to upgrade certain rigs within the fleet to add deepwater capacity.



"When the Victory Class rigs were first built in the 1970s, they were capable of drilling in 600 feet of water. In the 1980s we increased their water-depth capabilities to 2,000 feet, and in the 1990s, beginning with the *Ocean Voyager*, to 3,000 feet," says Eads.

"With the modernization of the *Ocean Baroness* and *Ocean Rover*, we've taken them to 7,000 feet and provided true 5th Generation capabilities," adds John Vecchio, Senior Vice President of Technical Services. "And we are capable, with additional risers, augmented mooring, and other more minor adjustments, of taking them even deeper."

"The Victory Class upgrades fundamentally involve stripping the rigs down to their basic hulls, then augmenting the hulls and outfitting the unit with modern equipment. When Diamond Offshore started this program, we heard some in the industry say that the level of modifications we were planning could not be done cost effectively. We did not agree. If you have selected your rig right, the heart is still good," Vecchio continues. "Performing normal and consistent maintenance has a lot to do with lifespan. With the Victory Class rigs, the shortest calculated fatigue life for the steel in the hull is 84 years, with others running into the 200-year range."

"Most of the time, equipment simply becomes outmoded," Vecchio explains. "And of course, drilling in deep water requires more robust systems. But that doesn't mean that you have to start from scratch."

#### What and how

"Our approach, basically, has been two-pronged," Vecchio continues. "In several instances, the modifications were made to suit specific

drilling programs for our customers. Both the *Ocean Quest* and *Ocean Confidence* fit into that category. In other cases, such as the *Baroness* and *Rover*, we have tried—successfully—to anticipate the market and modified rigs based on our assessment of what the marketplace needed—both near and longer term."

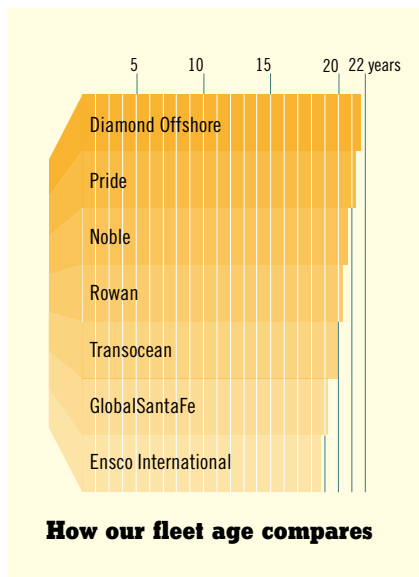
"Of the major Victory-Class upgrades, costs have ranged from a low of \$10 million for the *Voyager* to a high of \$188 million for the *Rover*," says Vecchio. This compares with over \$400 million for a similar new-build rig."

"In terms of complexity, the *Confidence* was the most challenging, due largely to the degree of automation required. The *Confidence* incorporates a Dynamic Global Positioning System capable of keeping the rig on station within 1–2 feet, 90% of the time. It can drill in 7,500 feet of water. And the unit can operate in extreme environments like those off the coast of Norway."

"With both the *Rover* and *Baroness*, we wanted rigs that could drill deep wells in deep water," Vecchio explains. "Just as important to the program, however, we wanted to ensure that they were efficient, dependable developmental drilling tools, capable of evaluating and completing wells successfully at these greater depths. And we wanted to be able to enhance them even more as

technology and customer needs warranted."

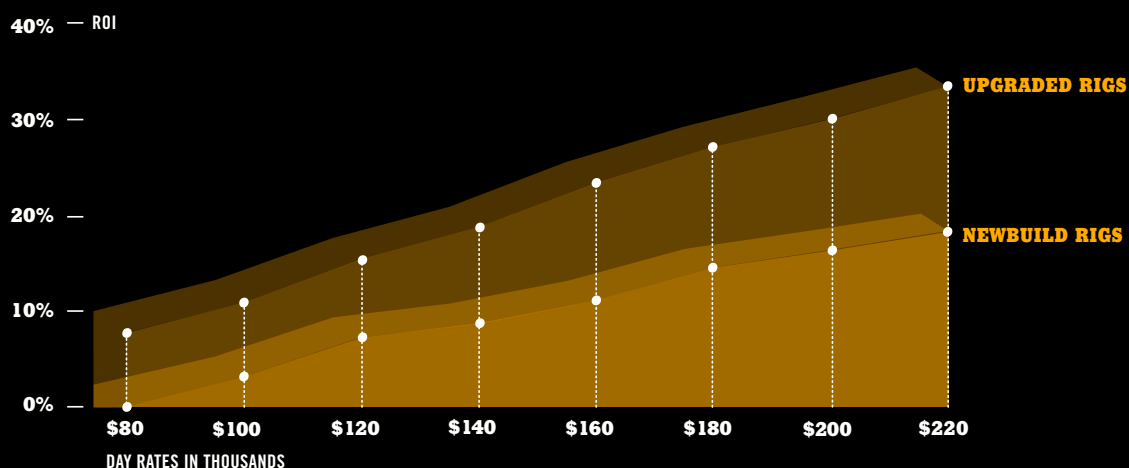
The two units are virtually identical Victory Class rigs, as originally built in 1973, and now as upgraded to 5th Generation status in Singapore, beginning with the *Baroness* in late 2000. The *Baroness* upgrade was completed in 19.5 months and the *Rover* in just over 20 months. Both upgrades came in under budget estimates.







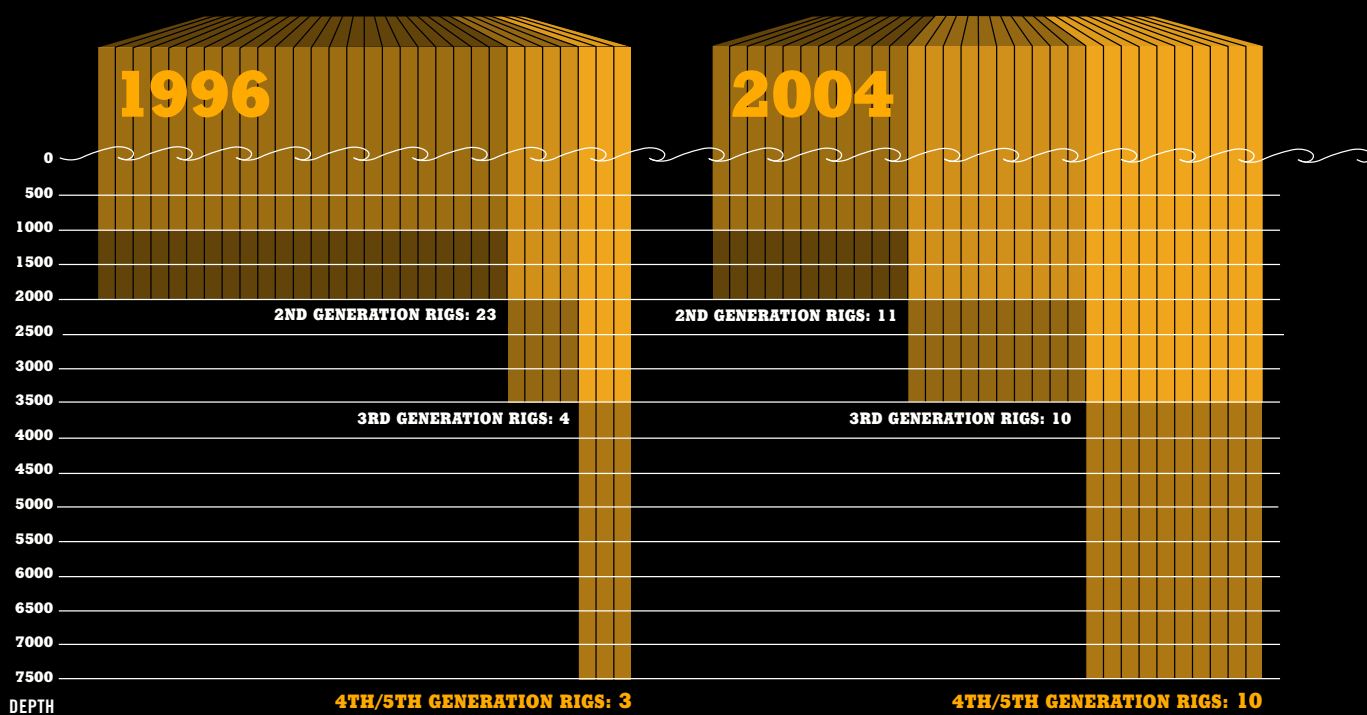
## Upgraded rigs average higher return on investment



While many of the upgrade candidates were built in the '70s and '80s, Diamond Offshore believed that because of their structural integrity they would be excellent choices for modernization. So, the Company began a process of upgrading the fleet on a rig-by-rig basis, as their

pedigree and condition dictated. From a cost and a time standpoint, the Company believed that 4th and even 5th Generation capabilities could be achieved for about one-half the cost of a new-build rig, and that the rigs could be operational in less than half the time.

## We've tripled the size of our deepwater fleet





“With the modernization of the *Ocean Baroness* and *Ocean Rover*, we’ve taken them to 7,000 feet and provided true 5th Generation capabilities,” says John Vecchio, Senior Vice President of Technical Services. “And we are capable, with additional risers, augmented mooring, and other more minor adjustments, of taking these rigs even deeper. With both the *Rover* and *Baroness*, we wanted rigs that could drill deep wells in deep water. Just as important to the program, however, we wanted to ensure that they were efficient, dependable developmental drilling tools, capable of evaluating and completing wells successfully at these greater depths. And we wanted to be able to enhance them even more as technology and customer needs warranted.”

Water depth capabilities for both rigs were increased from 1,500 feet to over 7,000 feet as outfitted. Drilling depth was taken from 20,000 feet to 35,000 feet. Variable deck loads more than doubled, and riser tension increased almost five times, from 640 kips to 3,600 kips. Mud and completion fluid storage capacity more than quadrupled. And crew quarters were expanded to accommodate approximately 50% more personnel.

The primary features that were upgraded to enhance developmental capabilities for the *Rover* and *Baroness* included large moon pools, high-capacity tree handling systems, offline activity capabilities, large deck areas and greater variable deck load capacity. Additional mud and completion fluid storage was also provided.

### **Results in the water**

Speaking to the American Association of Deepwater Engineers last year, Mike Sprawls, Drilling Manager for Unocal Gulf of Mexico, said, “Operators don’t want a rig, they want the result of utilizing the rig.”

Results for operators are what Diamond Offshore’s upgrades have been producing.

When Murphy Oil Corporation contracted the *Rover* to drill two wells on one of its leases in deepwater offshore Sabah, Malaysia, the company did so with options to drill additional wells within its Sabah lease. Since commencing drilling operations in July 2003, the *Rover* has drilled a total of 12 wells in water depths ranging from 377 to 5,729 feet. This has enabled Murphy to move quickly from location to location, amid numerous discoveries, with the flexibility to formulate development plans and return to the most promising wells in a timely manner.

Across the island of Borneo in the Straits of Makassar, the *Baroness* is providing Unocal the ability to quickly swap from surface to subsea blow-out prevention systems in deep water as the company seeks to extend the life of Indonesia’s East Kalimantan field.


### **Flexibility for the future**

“In total, we have spent an estimated \$1.1 billion over a period of eight years to create the second-largest floater fleet in the world, a fleet capable of drilling anywhere in the world,” says John Gabriel, Senior Vice President of Contracts and Marketing.”

“We have become very proficient at doing these modifications, at accurately projecting the costs and timeframes and putting together the teams to achieve the results we want. As long as the return on investment is there, we will consider doing them. Does this mean we will never buy or build new rigs? No. We will evaluate every opportunity that makes us more competitive.”

“The company’s long term strategy of upgrades has delivered results both in terms of fleet enhancement and share holder value,” says David Williams, Executive Vice President. “Our fleet has been completely transformed from predominately 2nd Generation units to one of the largest collections of deep water rigs in the world. We have successfully moved rigs from the low end markets to higher spec markets, which has enabled us to compete in the new frontiers offshore and has reduced the available supply in the shallow water fleet. This has improved the market dynamics for both classes of rigs.”

“We have accomplished this aggressive repositioning largely during slack market periods, using non-performing assets which has reduced our lost opportunity for upgrade candidates and put us in a stronger position in dealing with shipyards and suppliers. This overall strategy has allowed us to deliver a highly evolved fleet capable of competing in the most challenging applications at a fraction of new build costs.”

“Our fleet transformation is now beginning to pay huge dividends. We have been on the front lines of the most recent market movement and are well positioned take advantage of the opportunities and challenges ahead.” 





Pemex wants to produce **4 million** barrels of crude oil per day and achieve **100%**



Pemex se va mas

**profundo**

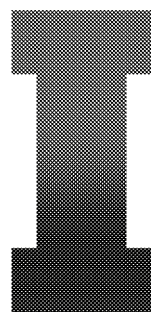
**Pemex goes deeper**

reserve replacement by **2006**. So they called on **Diamond Offshore** Corp.

**“It took tremendous coordination and engineering to make the pricing, timing, and modifications come together into a workable deal.**

## **Think of it as a mass migration of rigs from different locations to this one spot, with modifications being made enroute.**

**That’s an opportunity you don’t get to respond to very often.”**



In early June, 2003, Mexico’s state-owned oil company, Petroleos Mexicanos (Pemex), awarded Diamond Offshore three contracts to drill exploratory wells off Mexico’s southern Gulf coast. Drilling was to begin in late July, and Diamond Offshore had only a narrow window in which to mobilize three semi-submersibles from within its fleet and have them in the Bay of Campeche ready to drill.

Today, almost a year and a half into the four-year contracts, the operation is running smoothly. Four of Diamond Offshore’s rigs are drilling off Mexico’s central and southern Gulf coast in water depths from a few hundred feet to more than 2,200 feet (a fourth contract brought Diamond Offshore’s *Ocean Yorktown* from offshore Brazil in the fall of 2003). And an on-shore staff totaling approximately 23 ex-pats and Mexican nationals supports these rigs from a main office in Carmen and two satellite offices in Poza Rica and Tuxpan, north of Veracruz.

### **Getting the work**

Diamond Offshore had never worked directly with Pemex before and had not had rigs in the southern Gulf of Mexico since the early 1990s. “One of our strengths was that the mix of rigs in our fleet matched Pemex’s water depth requirements,” says Bob Blair, Diamond Offshore’s Vice President of Contracts and Marketing. “We evaluated recent bids to Pemex and decided to propose a multi-rig discount for the three rig package. Mexico’s bidding process is very strict and very public. Low bid wins. Period. You don’t negotiate your way in. We were not low bidder on two of the rigs on a stand-alone basis, but our packaged approach made us overall low bidder.”

“It took tremendous coordination between contracts and marketing, operations, and engineering to make the pricing, timing, and modifications come together into a workable deal,” explains Lyndol Dew, Vice President of North American Operations. “Think of it as a mass migration of rigs from different locations to this one spot, with modifications being made enroute. That’s an opportunity you don’t get to respond to very often.” “It was brilliant,” says John Gabriel, Senior Vice Presi-

dent of Contracts and Marketing—“and indicative of how this company thinks and acts.”

Consider the circumstances at the bidding stage: The *Ocean Ambassador*, rated to drill in 1,100 feet of water, is warm-stacked approximately 500 miles away in Galveston with a skeleton crew. The *Ocean Worker* is also about 500 miles away in the Gulf, and is capable of drilling in up to 3,500 feet of water. The *Ocean Whittington*, rated to operate in up to 1,500 feet of water is available, but the rig is some 6,500 miles across the Atlantic off the west African coast of Ghana.

Modifications will be necessary to meet Pemex’s specifications. The blowout preventers on the *Whittington*, for example, will have to be changed out. Deluge systems will have to be added to each rig and the fresh water generation systems, both for human consumption and for the drilling mud, exchanged. Production test equipment will also require modifications. To accomplish this task, three engineering crews will work simultaneously.

Crews for three rigs will also have to be recruited and hired, along with the onshore team.

Between July 27 and August 9, 2003, all three rigs arrived in the Bay of Campeche. The *Whittington* had come from Ghana by way of Trinidad in the West Indies, undergoing its modifications enroute to the Gulf of Mexico. Two-months later, the *Ocean Yorktown* joined this unprecedented flotilla after a fourth contract was awarded.

### **Mexico’s energy sector**

Mexico and the U.S. have a symbiotic relationship in many ways, but one of the most important is through the energy sector. In 2003, a year in which Mexico’s crude oil production jumped 6.1% over 2002, Pemex produced some 3.4 million barrels of crude per day—3.8 million including condensate and natural gas liquids. This was enough to earn Mexico a fourth-place ranking among the world’s oil producers, behind Saudi Arabia, Russia, and the U.S. Out of Mexico’s total net exports of 1.75 million barrels per day, over 90% went to the U.S. market, making Mexico the number three foreign supplier of oil to the U.S. behind Canada and Saudi Arabia.

Oil provides about **1/3** of Mexico’s operating revenues and more than **90%** of Mexican exports.



**Conadat Gomez**  
ADMINISTRATION MANAGER

**Mara de la Luz Lòpez**  
ADMINISTRATIVE ASSISTANT

**Louis Guerra**  
DRIVER

**David Bruce**  
AREA MANAGER,  
OPERATIONS MANAGER,  
OCEAN AMBASSADOR

**Arnulfo Zetina**  
WAREHOUSE  
ASSISTANT

**Alvin McCall**  
OPERATIONS MANAGER,  
OCEAN WHITTINGTON

**Jorge Christfield**  
ACCOUNTANT

**Luz del Alba de la Cruz**  
CLEANING



Energy provides critical jobs for a country whose unemployment rose **28%** in 2003.



**Verónica Dominguez**  
SECRETARY

**George Hoover**  
MATERIALS MANAGER

**Raul Galvez**  
TRANSLATOR/SECRETARY

**Amelia Pérez**  
SECRETARY

**Horst Alvarez**  
JUNIOR BUYER

**Roosevelt Rivera**  
ACCOUNTANT

**Wendy Montero**  
CREW CHANGE  
COORDINATOR



Diamond Offshore unleashed **348** skilled people comprising over **120** years of experience to bring **4**





**Beatriz Hernández**  
ACCOUNTANT

**Alicia Pérez**  
RECEPTIONIST

**Willie McClymont**  
OPERATIONS MANAGER,  
OCEAN YORKTOWN

**Antonio Alvarez**  
LOGISTIC COORDINATOR

**Maria Ruiz**  
ADMINISTRATIVE ASSISTANT

**David Stogner**  
OPERATIONS MANAGER,  
OCEAN WORKER

**Karina Amaya**  
ACCOUNTANT

**rigs** to Mexico over a combined distance of **7,873** miles to be fully functional in **60** days.



**“We are on a learning curve.**

**The packaging arrangement with Diamond Offshore is part of the learning process regarding how Mexico structures future contracts with foreign firms.**

# **It's a good way to bring down our costs.**

**We can already see this happening with Diamond Offshore.”**

But as important as Mexico's oil production is to the U.S. marketplace, it is even more critical to Mexico, itself. Oil provides about a third of the federal government's operating revenues. It is essential to meeting the country's increasing power needs. And oil is a major—and growing—source of employment in a country whose unemployment rate rose significantly in 2003 over 2002.

At the beginning of 2004, Pemex listed Mexico's proven crude oil reserves at 15.7 billion barrels, the fourth largest in the western hemisphere. “Ultimate potential reserves” were reported to be 40.6 billion barrels. Getting the most from its oil resources is a top priority for the Mexican government and, therefore, for state-owned Pemex, the largest company in Mexico.

The drive to increase production and replace reserves is essential to Mexico's economy. As the eighth largest integrated oil company in the world and the sole producer of crude oil, natural gas, and refined products in Mexico, Pemex is the only entity that can make this happen. The company's immediate goal, according to its 2003 Statistical Yearbook, is to increase crude oil production to 4 million barrels per day and achieve 100% reserve replacement by 2006. In 2002 over two-thirds of the crude oil came from its oil fields in the Bay of Campeche where Diamond Offshore's rigs are located.

Looking out five years, Pemex estimates it will need to make capital investments in the neighborhood of \$45 billion in exploration and production to meet the projected growth in oil demand domestically and internationally.

“Our focus today within Pemex is on ‘efficiency,’ ‘best practices,’ ‘training,’ and ‘deepwater,’” says Baudelio Prieto de la Rocha Pemex's Manager of all but one of Diamond Offshore's drilling contracts. “This is part of the impetus behind opening up the country's exploration effort beyond that of just leasing the necessary equipment and expanding it to include hiring the personnel and expertise, as well.”

“We are on a learning curve,” says Ing. Prieto de la Rocha. The packaging arrangement with Diamond Offshore is part of the learning process regarding how Mexico structures future contracts with foreign firms, he believes. “It's a good way to bring down our

costs. We can already see this happening with Diamond Offshore.”

“We also have to train our workforce here in Mexico to work in new ways,” he says, unequivocally. “Working with first-level companies is the best way to do it. We're very comfortable working this way at Pemex. It's bringing knowledge and confidence. We are seeing a lot of enthusiasm, both in Pemex and in the labor unions. Even with the language barrier, the communication is good.”

Ing. Prieto de la Rocha believes that if Pemex is to help Mexico meet its economic goals for the future, then moving into deeper water is a matter of “when”, not “if.” Pemex regards deepwater as 500+ meters, or 1,640+ feet, and ultra-deepwater as 1500+ meters, or 4,900+ feet. Over time, he says, Pemex is anticipating from 140 to 150 offshore installations including production, maintenance, communications, and drilling facilities with approximately 15,000 people working on board.

In fact, at 2,233 feet of water and 1,496 feet of water, respectively, both the *Worker*, which recently completed a discovery well, and the *Yorktown* are currently drilling in what ranks as deepwater by Pemex standards.

“All of our offshore drilling in Mexico so far has been done in shallow water, generally in a range from 200 to 350 feet. But we are starting to see a depletion of these fields,” Ing. Prieto de la Rocha says. “We have to go into deeper water.” Of its “untapped exploration potential,” Pemex lists around 263,000 km<sup>2</sup> on its Continental Shelf, with another 567,000 km<sup>2</sup> in deepwater. Of the four major deepwater areas thought to be promising, two are approximate to where Diamond Offshore is currently drilling in the Bay of Campeche.

“To date, we've drilled only a few wells in depths greater than 500 meters, and our personnel have little experience with semi-submersible rigs,” Ing. Prieto de la Rocha admits. “So there's much for us to learn here, too. One of our goals at Pemex is to train a complete semi-submersible rig crew within the labor unions.”

## **Opportunity, a two-way street**

There is considerable controversy in the U.S. today about “sending U.S. jobs overseas.” At the same time, there is unquestioned need

**1 1/2 years into a 4 year contract, four Diamond Offshore rigs are drilling**



**Baudelio Prieto de la Rocha**  
Project Manager, Petrosbras Mexicanos

**“Our focus today within Pemex is on ‘efficiency,’ ‘best practices,’ ‘training,’ and ‘deep-water,’” says Baudelio Prieto de la Rocha—Pemex’s Manager of all but one of Diamond Offshore’s drilling contracts. “This is part of the impetus behind opening up the country’s exploration effort beyond that of just leasing the necessary equipment and expanding it to include hiring the personnel and expertise, as well.”**

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**“All of our offshore drilling in Mexico so far has been done in shallow water, generally in a range from 200 to 350 feet. But we are starting to see a depletion of these fields. We have to go into deeper water.”**

in Mexico to create more jobs for its workforce in Mexico. The mix of employees on Mexdrill’s payroll today is approximately 55/45% in favor of Mexican nationals.

David Bruce, Area Manager of Diamond Offshore’s Mexico subsidiary, Mexdrill Offshore, views it this way: “We have actually put two idle rigs to work, creating jobs that did not exist in the U.S. for approximately 80 U.S. workers. At the same time, we have put Mexican nationals to work and are training them in the operation of semi-submersibles, something in which they have virtually no experience, but will need for the future. That is job creation.”

So how does Bruce describe his experience in Mexico to date? “There were of course concerns at the project’s outset about what challenges Diamond Offshore might face.”

“But overall our experience has been good,” says Bruce. “It has been good in terms of how the team has come together, in terms of safety, in terms of data generated, in terms of the lack of downtime, in terms of operating efficiency, and in terms of the working relationship that Diamond Offshore is developing with the major international oil company that was formed back in 1938 when Mexico nationalized its fledgling oil industry.”

“At the same time, it is important to understand that we arrived with no support system in place. And that is crucial because, in a country where culture, language, work styles, management systems, and much of the technology are different, offshore rigs and crews can’t function without strong shore-based support,” Bruce continues.

To build that support system, Bruce brought with him to Mexico the foundation of a very strong and experienced team. It was comprised of operations managers David Stogner and Jimmy McGraw, two bilingual materials managers, Enrique Bravo and George Hoover, and bilingual administrator Conadat Gomez.

To begin augmenting his staff with nationals, Bruce, who has been with Diamond Offshore for 32 years and is also Operations Manager of the *Ocean Ambassador*, hired executive secretary Veronica Dominguez. Dominguez, who also holds a law degree, immediately

began to assist Diamond Offshore’s agent Fernando Zambrano, as well as Gomez and Bravo in finding appropriate office space and building an administrative team from among the nationals in Ciudad del Carmen. Ray Garcia from the Houston Administration staff also assisted with the myriad logistical details.

“The challenges aside,” Bruce says, “the reality today is that we have an excellent labor force; on the rigs, as well as in the local offices. Our people are very eager to work, eager to enhance their skills, are safety conscious, and above all, very dedicated to helping Mexdrill achieve its goals, which really are their goals,” says Bruce. “Logistics are tougher, no question,” he continues. “But the willingness and capability of our staff to work around the difficulties presented by language barriers and approvals have prevented any real problems.” Additionally, “Pemex’s drilling plans have not been difficult to implement. The two companies’ operating procedures are actually very complementary and our objectives match up well,” Bruce continues. “And, while the financial structure for operating our rigs in Mexico is very complex, we have mastered it sooner than I thought we would. That is because everybody at both ends, here and in Houston, have worked together to figure it out.”

“Any one of these areas could undermine a new working relationship like ours, but they have not. When people want to communicate, when they want to make things work, they can—whatever the language barrier. I see that here every day,” Bruce concludes.

Steve Poitier, OIM on the *Ocean Worker*, describes his experience much the same way. Poitier, who along with his Operations Manager David Stogner (and Bruce, and Willie McClymont, Operations Manager on the *Yorktown*), is taking Spanish lessons, attributes it to “good people being happy about having a good job.”

Moe Plaisance, Vice President of Operations Support for Diamond Offshore in Houston travels to Ciudad del Carmen to conduct Diamond Offshore’s labor union semi-submersible training sessions. Says Plaisance, “You can tell by the kinds of questions people ask. They really want to learn and they appreciate that we’re not only here to work but to teach.” □

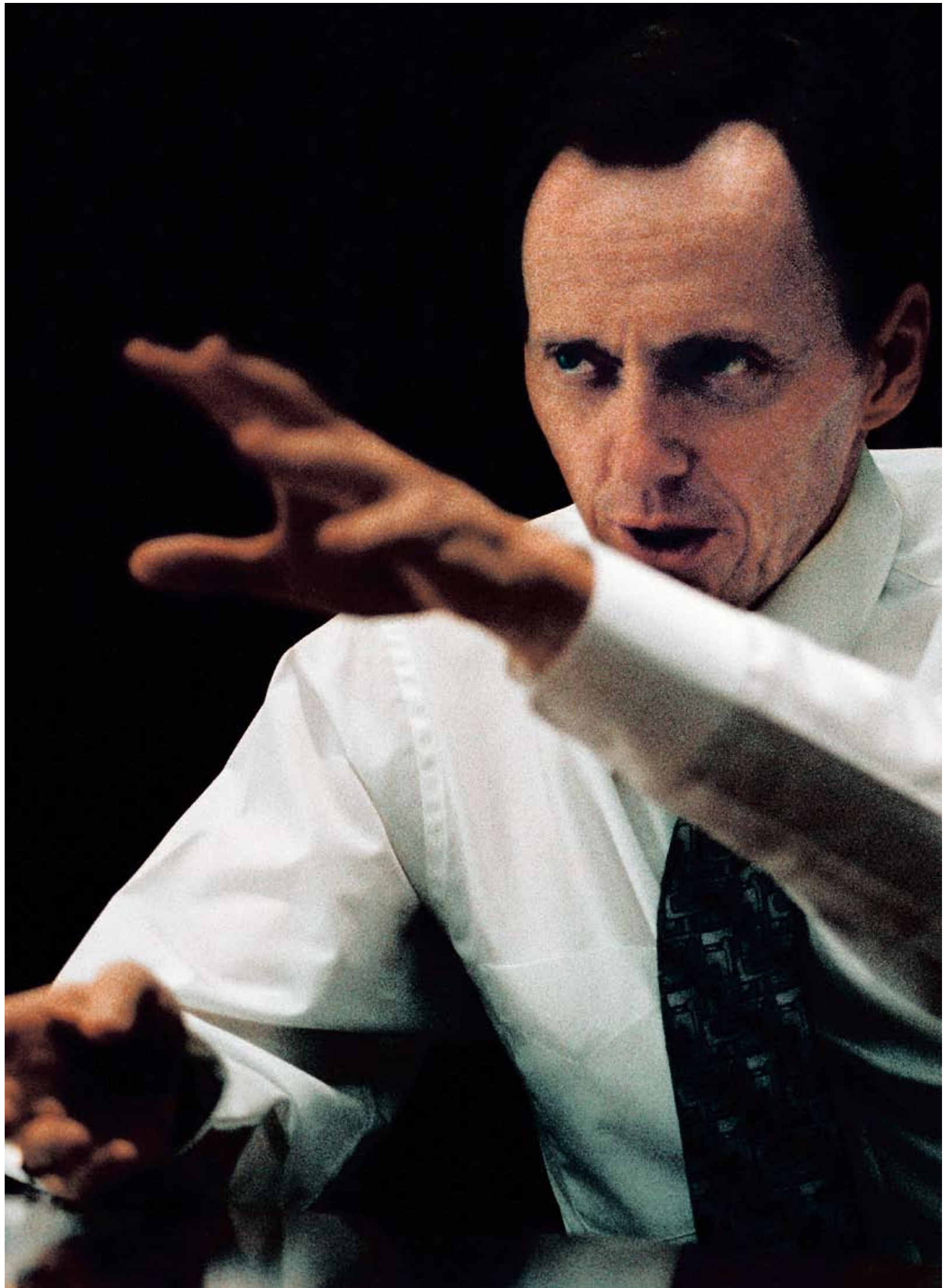
in water depths from a few hundred feet to over **2,200 feet.**



# **Straight Amerada Hess' George Sandison talk**

**offers candid insights on industry trends, deep water  
and what matters most in the relationship  
between producers and offshore contractors.**

**There's an old saying in the drilling  
business that critical decisions  
should be made around the rotary  
table, not the conference table.  
Few people can appreciate the  
spirit and practical wisdom of that  
idea better than George Sandison,  
Amerada Hess' senior vice president  
in the Americas and West Africa.**





“In a world so dominated by legalities and necessary self-protection,  
it’s refreshing to work with

# people who see

# B

orn in Scotland and trained in civil engineering at Aberdeen University, Sandison cut his teeth as a North Sea drilling engineer for Texaco. He later moved through a variety of assignments and management posts with Texaco, jobs that would take him to New York, Kuwait and Houston. But the most significant turning point in his life—the one that set his course toward corporate leadership—was the move from Scotland to Morgan City, Louisiana when he was 25 years old.

It was in Morgan City, and on the rigs working the Gulf of Mexico, where Sandison built a reputation as a straight-talking, stand-up guy, somebody who got things done. In those years he mastered offshore equipment and technology, and he developed a bone-deep respect for the offshore crews that drill for oil.

been reached, however, the debate stops, and everyone should pull together in executing that decision.”

Despite all the complexities, and the details included in today’s contracts, Sandison is old school about a handshake sealing a deal, which is why he insists on working with people he can trust. “We work with Diamond Offshore for a number of reasons,” he says, “but first among those reasons are Diamond Offshore extremely capable people. I am speaking here about guys like Denny Ducker, who is one of the true characters of the oil field, and Mickey Welch, another seasoned professional who epitomizes Diamond Offshore’s culture. These guys have a history. They are great to be with and they know how to perform. That means a lot to me.”

To amplify the point, Sandison frames his thinking about

**“What sets Diamond Offshore apart is an overall flexibility and responsiveness in their approach to the business. I see it in their corporate strategy, especially in terms of the investments they have made to upgrade and reposition their deep-water fleet. I see it in their working attitude, their approach to safety as a philosophy in action rather than a recognition program, and their ability to view my goals as their own. Very simply put, Diamond Offshore is a get-it-done kind of company.”**

Vance Greene runs Diamond Offshore’s contracts and marketing shop in New Orleans. He has known George Sandison since those Morgan City days, and he recalls “George’s thoroughness in designing drilling programs, his performance in pre-spud meetings, and the way he would relate and utilize the crew’s experience in tackling the unforeseen challenges that are part and parcel of offshore drilling operations.

“George is all about getting results,” Greene explained, “but he is incredibly fair. He puts people first.” George Sandison does not shy away from strong opinions. He is in the habit of speaking his mind, always politely, but always candidly. For instance, he believes there’s too much polite blather masquerading as communication in American corporate culture. He is convinced it hurts performance because too many business conversations sidestep the important issues.

“My approach in managing people is to treat them as I want to be treated. But at the same time I’m very direct in demanding performance. I want to surface the serious issues quickly, and I want everyone to have a say in framing what should be done. I speak my mind and I expect those around me to do the same so we can assess all sides of an argument. Once a decision has

contractors by contrasting those who simply apply a contract with those who interpret his business objectives into their understanding of an agreement. “In a world so dominated by legalities and necessary self-protection, it is refreshing,” he says, “to work with people who see the big picture, and are willing to take decisions that help me reach a goal,” Sandison explains.

What sets Diamond Offshore apart, Sandison confides, is an overall flexibility and responsiveness in their approach to the business. “I see it in their corporate strategy, especially in terms of the investments they have made to upgrade and reposition their deep-water fleet. I see it in their working attitude, their approach to safety as a philosophy in action rather than a recognition program, and their ability to view my goals as their own. Very simply put, Diamond Offshore is a get it done kind of company. That, and their cost competitiveness helps explain why Diamond Offshore’s been doing the majority of our discretionary drilling in the Gulf of Mexico.”

Sandison directly oversees the worldwide activities of a thousand employees and contractors whose goal is to efficiently and safely produce oil and gas from Hess discoveries in the Americas

# the big picture

and are willing to take decisions  
that help me reach a goal.”



and West Africa. His job, as he describes it, is divided into two parts: one involves defining strategic direction, while the other focuses on managing tactical operations and performance. He is taking advantage of Hess' size and flexibility to move rapidly in pursuit of growth opportunities. He is looking to develop new discoveries, and he is always driving to create more efficiencies. By virtue of his years at Texaco, Sandison has a global and integrated perspective of the industry. He thinks we are entering into a new and very different period; one marked by a combination of tight oil and natural gas markets and pricing levels not seen in years.

“Few appreciate,” he says, “how tight the supply/demand equation really is throughout the world and the impact that will have on long term oil and gas prices. Worldwide demand for energy increases every year, and we can expect our business to grow with that increased demand. That should show up in the form of a sustained pickup in exploration and production drilling activity. Offshore, I anticipate increased exploration activity in the deepwater arenas, such as the Gulf of Mexico, West Africa and Malaysia.”

As Sandison sees it, “the on-shore possibilities in the US are limited by size and availability, and the Gulf of Mexico shelf is moving to niche players and smaller independent producers. The North Sea, he says, is pretty well exploited; production declines are setting in, which mirrors what we saw in the Gulf of Mexico shelf 10 or 15 years ago. But,” he adds, “as you can see from the current surge in drilling activity in the Gulf and in the North Sea floater markets, mature does not necessarily mean dead.”

“The Middle East has enormous potential and vast resources but the issue, of course, is access. A lot has to happen politically and socially in places like Iraq and Iran before those areas reach higher levels of oil and gas development. Much the same could be said about Russia. Development in these countries will happen, and when it does we have to be ready. In the meantime the industry will likely focus on other areas such as those already mentioned, and others such as Venezuela and Trinidad.”

“This is a great industry. It is full of challenges and the landscape is constantly changing. But despite those challenges, or perhaps because of them, it is a fascinating business to be in. Add to that the fact that the people are among the best in the world to work with, and you can see why I enjoy the business so much. The future for our industry looks bright, and I'm looking forward to being a part of it.”





# Drill and go

**Surface stack blowout  
prevention technology**

**is far from new.**

**But its application  
in deep water is.**

**Unocal pioneered  
the standard**

**and is making the  
technology pay off**

**in Indonesia.**



In early 2003, Diamond Offshore was awarded a drilling contract by Unocal Indonesia Company to drill in Unocal's numerous fields in the Straits of Makassar between Borneo and Sulawesi. The contract represented Diamond Offshore's first opportunity to use a surface blowout prevention system on a semisubmersible. The rig of choice was Diamond Offshore's Victory-class *Ocean Baroness*, newly upgraded to 5th Generation capabilities.

By mid-2004, the *Baroness* had drilled 12 wells for Unocal in water depths ranging from 989 feet to 6,036 feet. Of the 12 wells, 11 have employed surface blowout prevention technology. They were drilled in approximately one-third of the time and at cost savings ranging from \$5 million to \$10 million per well compared to conventional drilling techniques. And that was precisely Unocal's intent: to be able to drill faster and more economically, increasing discovery opportunities within a fixed budget.



### **Unocal's surface blowout prevention incentive**

Unocal had been active in the East Kalimantan field for more than 30 years and was faced with the reservoir's declining productivity. Yet the company was convinced of the potential for significant new discoveries at greater water depths. So Unocal chose to adapt surface blowout prevention technology for use in deeper water.

"Surface stack technology positions the blowout prevention system just below the bottom of the rig instead of on the seabed," explains Karl Sellers, Diamond Offshore's Vice President of Engineering. "Drilling with a surface blowout prevention system in deep water using a semisubmersible is essentially a new application of existing technology. The basic method is not much different than the blowout prevention configuration on a jackup. But the jackup is fixed in place, whereas a semi will move with waves, wind, and current."

### **Taking surface stack technology deeper**

In 1996, Unocal drilled the world's first modern deepwater well using surface stack technology. Having initially tested the concept in Indonesian waters at depths of fewer than 200 feet, Unocal has since drilled over 150 wells in the area using a surface stack in water depths ranging from 300 to 6,050 feet. Many of the deepest wells have been drilled by Diamond Offshore and the *Ocean Baroness* in the Straits of Makassar.

Located just east of the island of Borneo, one of the largest in the 17,000-island chain that makes up Indonesia, "the waters of the Straits are extraordinarily calm," according to Alan Summers, Diamond Offshore's Drilling Engineer on the project. Adds John Lusk, OIM on the *Baroness*, "The seas here never get above a couple of feet, and are made to order for keeping the *Baroness* on station while operating with its surface stack system."

### **The new *Ocean Baroness***

A Victory Class semi-submersible, the *Baroness* was built in 1973 and spent most of the next two decades operating in the North Sea. Diamond Offshore bought the rig in 1994 with the intent of upgrading it at a future date. Because of the unit's highly adaptable and structurally sound hull, the *Baroness* was particularly well suited to a makeover into a 5th Generation rig. In late 2000, the *Baroness* was mobilized to the Keppel FELS shipyard in Singapore for a \$180-million modernization. When the upgrade was completed in early 2002, the rig was capable of drilling in 7,000 feet of water (deeper with pre-set mooring). And it represented an efficient deep-water deep-hole developmental drilling tool and exploration vessel.

### **Going to the next level**

Many features of the *Baroness* were attractive to Unocal. These included the rig's riser tension capability, large deck space and quarters, mooring system and mud storage capacity. Even so, to meet Unocal's specifications, the *Baroness* would require approximately \$3.2 million in additional modifications, primarily to upgrade the rig for surface stack drilling in water depths of up to 8,000 feet using both 13<sup>3</sup>/<sub>8</sub>" and 16" casing instead of 21" marine riser.

Modifications included fabrication of a wellhead support platform to contain the wellhead and surface stack, and provision of an 18<sup>3</sup>/<sub>4</sub>-10,000 psi blowout preventer and 3-barrel telescoping joint. Additionally, the existing blowout prevention MUX control system was modified to interface with the new surface stack.

Design, procurement, and prefabrication were initiated in mid-December, 2003. The *Baroness* entered the KFELS shipyard February 7, 2003, for surface stack modifications and mobilized just 31 days later for Indonesia on March, 10, 2003. Drilling began in April, 2003. Start to finish, the modifications were accomplished in two-and-one-half months, thanks to considerable collaboration between Unocal, Diamond Offshore, and their consultants and suppliers. Unocal's experience in surface stack combined with Diamond Offshore's experience in rig upgrading was essential to the process.

The *Baroness* was the first rig with an N-line (direct acting) tensioner system to use surface stack technology. The tensioners maintain a constant pull on the casing and riser, just like a piston pulling up a weight. The one key advantage of N-line tensioners is that there are no wires to maintain or wear out, as with a conventional system. Unocal also wanted the ability to swiftly swap the blowout preventer back and forth between a 10,000 psi surface system and a conventional 15,000 psi subsea system to meet the requirements of well targets. To achieve this, the surface stack is set back in the moon pool as with a subsea stack. The wellhead support platform is changed out for the conventional tensioner ring. All of the subsea equipment is then run normally. The change out takes a relatively quick 24-48 hours.

Mike Jackson, Operations Manager, says the key to drilling a well using a surface stack is that the operator must re-think and revise their "conventional" well design—"which is one reason I think many operators are still reluctant to consider using surface stack technology for subsea wells. Unocal uses either a 16" or 13<sup>3</sup>/<sub>8</sub>" casing string as the first casing string deployed. This string is run all the way to the moon pool. The wellhead is installed on the top of this string via the wellhead support platform and the surface stack is installed on top of this. The assembled components are supported by the riser tensioners. Blowout prevention controls are connected by adapting one of the subsea MUX pods to hydraulic lines feeding the surface stack."

In addition to faster drilling times, much of which Jackson attributes to a lack of heavy marine riser, there is, in his view, a significant human safety factor with surface stack. "The difference in weights between marine riser and the 16" casing and between the surface and subsea stack makes handling of the equipment safer for all hands involved."

### **Outlook**

Unocal and Diamond Offshore's joint experience with surface stack in a deepwater environment has been mutually successful. The 12 wells drilled through August 2004, have yielded a wealth of knowledge about the reserves in the Makassar Straits for Unocal. The additional work would entail drilling in water depths ranging from 4,000 to 8,000 feet. Diamond Offshore is considering adapting the *Baroness*—already capable of operating in 8,000-foot-depths—to work in even deeper waters.

The need to find energy in ever deeper waters is a given today. Shell recently applied surface stack technology in more than 9,000-foot depths off of Brazil. As more operators like Unocal and Shell make the case for using surface stack systems in deep water, the more mainstream the application and more refined the technology will become.

Will the benefits be worth the effort? Unocal thinks so. And so does Diamond Offshore. ■

### Ocean Baroness features

The modernization of the *Ocean Baroness* included a new drill floor and drillers cabin with state-of-the-art integrated drilling and instrumentation control systems; 4,000-horsepower draw-works; and 60" diameter rotary and diverter. The *Baroness* also employs a high-capacity deck crane to handle today's heavy production trees; and six N-line riser tensioners, with a capacity of 3.6 million pounds. The derrick and traveling equipment are rated for 2 million pounds, and the rig is equipped with four mud pumps, a 7,500-psi circulating system, and a MUX subsea blowout

prevention control system with 10,000 feet of cable.

Additionally, a primary objective of the *Baroness* upgrade was to provide a rig that was an efficient developmental drilling tool in addition to being a highly capable "deep-hole" exploration vessel. This was achieved by providing a large cellar deck and moon pool (25 ft. x 90 ft.), equipment to facilitate offline activity (see below) and efficiently handle today's large production trees, substantial completion fluid storage capacity and deck space to stage production equipment.



### Unocal's History in Indonesia

Unocal has been operating in Indonesian waters since 1968. That is when Unocal Indonesia Company signed its first production sharing contract with Pertamina, the country's state oil and gas company, to drill in waters off northwest Sumatra. This contract represented one of the first agreements between an international oil company and a state government under which the government entity would actually receive a share of any hydrocarbons found. Previously, the oil companies had received all of the production and compensated the state governments through royalties. A year later, after finding no commercially viable discoveries and returning the exploration blocks to Indonesia, Unocal

began exploration offshore East Kalimantan under a second production sharing contract. Two years into the contract, the company found the Attaka Field, still Indonesia's largest offshore oil and gas discovery. In the three-plus decades since production began, Unocal says Attaka has yielded approximately 850 million barrels of oil equivalent.

Attaka was the first of many successes for Unocal in offshore Indonesia, right up to and including the present. Among Unocal's other milestones in Indonesian waters: the first deepwater production project; first tension-leg platform installation (in Southeast Asia); first commercial deepwater discovery; first subsea well;

first 3-D seismic survey; and horizontal well.

At the close of 2003, Unocal reported holdings of varying interests in some 6.6 million acres (26,709 square kilometers) in Indonesian waters. It also plans to become a major supplier of liquefied natural gas to Indonesia, which operates the largest LNG facility in the world, and it provides geothermal energy to the country. With a total investment in the area estimated at some \$5 billion, Unocal has made Indonesia one of its core centers for international operations and has described its offshore activities there as one of the company's major sources of growth over the next decade.

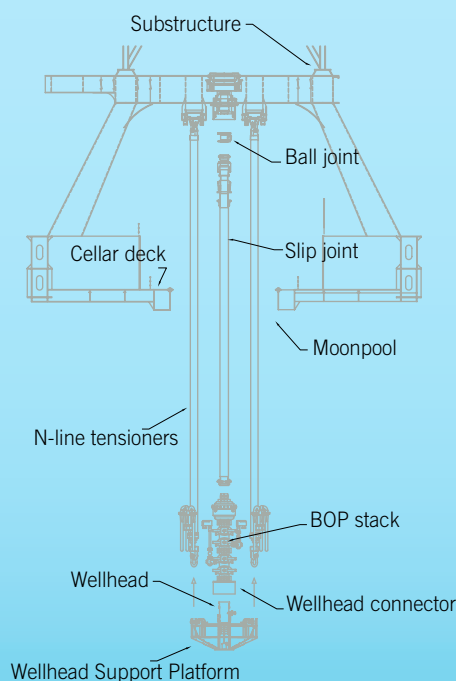
### Offline Capabilities Save Time and Dollars

The *Baroness* also possesses significant Offline capabilities. These capabilities provide operators the flexibility to carry out multiple tasks without interrupting primary drilling activity, thereby saving time and dollars. To date, in addition to primary activities, the *Baroness* has recorded an average of 87 hours of offline operations per well.

Examples of Offline Capabilities:

- Make up and lay down drill pipe and BHA while drilling.
- Transit with 1,500 Kips of setback, allowing make-up and setback of drill pipe while underway.
- Hang off casing in moon pool while running anchors.
- Pick up drill pipe while drilling.
- Prepare tools while drilling.
- Make up shoe, float collar and centralizers to casing joints.
- BOP can be hung off as a trip saver for subsea tree installations.

### BOP: Primary Components

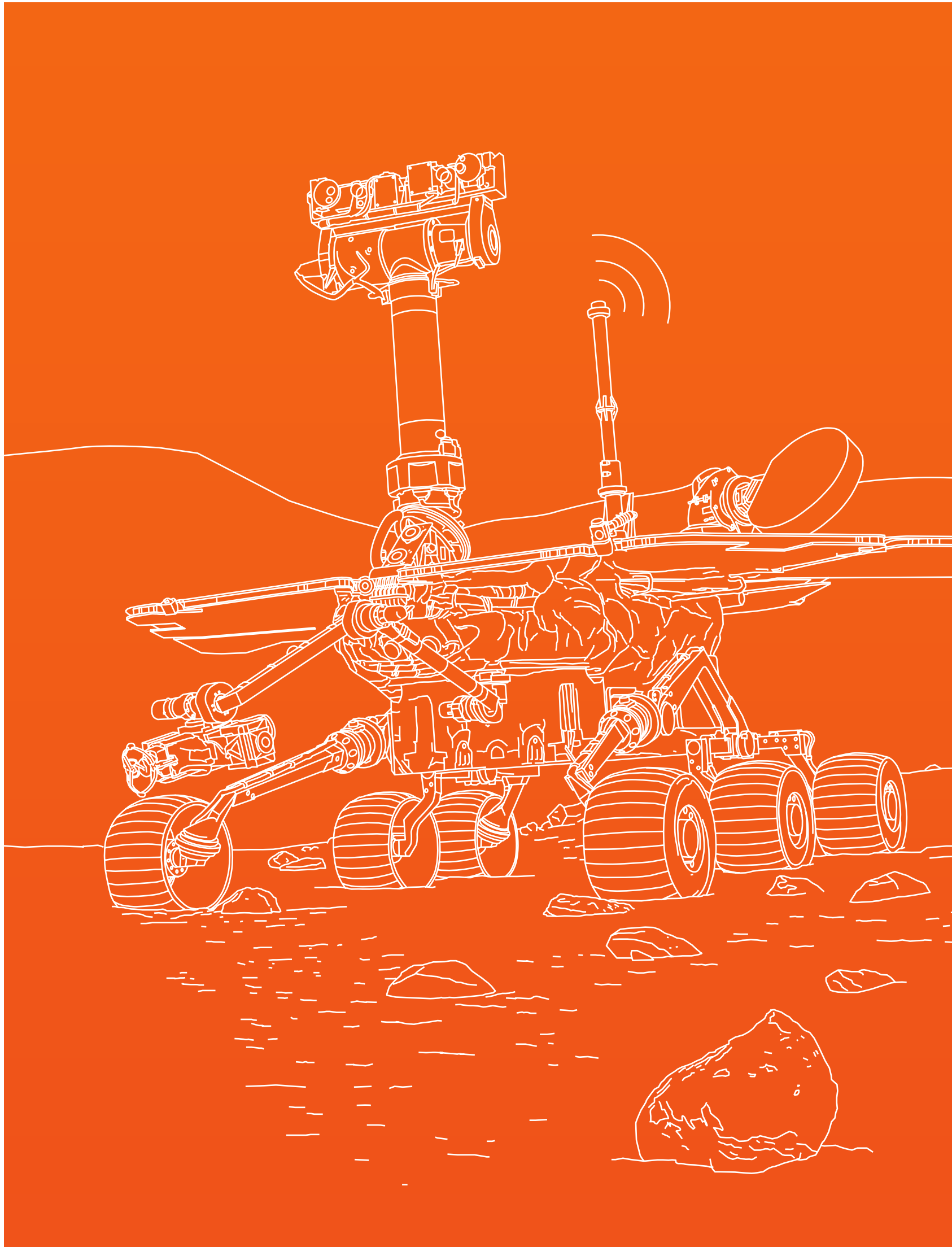


### Primary SBOP Modifications

Following is a list of rig modifications and new equipment required to enable the *Baroness* to drill with a surface blowout prevention system:

- Wellhead Support Platform: steel structure that contains the wellhead and surface blowout preventer and is suspended from the rig's N-Line Tensioners.
- 18-10 blowout preventer and frame assembly with 4 rams and 1 annular.
- 3-barrel telescoping joint with 44.5' of stroke.
- New ball joint.
- Riser Flood System: floods the riser with saltwater in the event fluid is being lost to the formation.
- Riser Recoil System: increases the response time of the existing system.
- Relocated tensioner goosenecks to provide additional clearance from the sides of the moon pool.
- Modifications to the rig's subsea multiplex blowout prevention control system, blowout preventer transporter, and blowout preventer setback area to accommodate the new stack.





# Chasing lightning

## Employing evolving communications technology to save money and downtime

Technology is a moving target. Whether you're communicating across town, to an offshore drilling rig in the Gulf of Mexico or Indonesia, or a landing craft on the surface of Mars, the data's there and back again, at the speed of light. The biggest difference between the technology of Sir Isaac Newton's time or Alexander Graham Bell's and today's is that today's target moves faster, a lot faster. Technology that was competitive last year may be obsolete next, if not sooner. And this makes choosing your technology much harder. Nowhere has the rate of change been faster than in communications technology.

**“We can respond almost instantly.  
And the fact that we have uninterrupted access to  
additional data and expertise  
helps us solve and even prevent problems.”**

### **How it was—and is**

In 1998, Diamond Offshore made a choice that changed the way the Company communicates internally and around the globe with the installation of the Company's first Virtual Private Network.

“Installing a Virtual Private Network carried an element of risk, because the system was relatively new at that time,” remembers Tom Layne, Electrical Supervisor with responsibility for International Operations. But if successful, the reward would be a complete, low-cost worldwide communication network that could help reduce downtime on the Company's rigs.”

“In the early 1980s, drilling technology was largely manual: equipment operation, troubleshooting, communications, response. The extent of automation on a given offshore rig might have been a personal computer running the Top Drive system. The driller stood with his hand on a brake handle, on one side of the drill floor in all kinds of weather, controlling the drilling operation. The derrick man perched on the “monkey boards” 90 feet above him guiding pipe sections onto the drill string. If an electrical problem developed, the electrician got out his tool bag. If he could not fix the problem, you radioed for help. You might get through quickly or you might not, since radio frequency varied by time of day and place. The equipment expert was often days away via air or boat. In the meantime, downtime,” says Layne.

“Today, the driller directs the operation from an ergonomic driver's seat in an air-conditioned room on the drilling floor using controls not unlike computer-game “joy sticks.” The derrick man, now the assistant driller, sits beside him at his own pipe-handling control station. They direct the function of the equipment through computer-grade monitors connected to video cameras. The data is shared throughout the rig by the OIM, geologist, mud loggers, and the team operating the subsea Remote Operations Vehicle. If a problem develops, it is still fixed by smart technicians, but data access is different—it is immediately available. So the time factors have shortened dramatically.”

Diamond Offshore's Maintenance Manager Tommy Green has always said that “electrical problems are hard to find and easy to fix. What today's technology has done, at least in part, is alter the search for the problem. We can respond quickly, with many more people viewing the same information simultaneously. If for some reason we can not solve the problem ourselves, we have uninterrupted access to the network operations centers of our equipment suppliers' who may have additional expertise and can view the same data through the Virtual Private Network. Importantly, we also have the capacity to use that constant stream of data to prevent problems.”

“And even if the problem can not be repaired through the system and requires a person to travel across the world, that person will arrive better prepared to get the rig back on payroll more quickly than ever before.”

### **The timeline**

Mike Trahan, Director of Internet Services, traces the timeline: “Basically, there is before 1992 and after 1992—or the radio age and the telephone age.”

“Pre-1992, Diamond Offshore rigs had a simple, time-tested method for communicating with the outside world: a single radio signal known as single-side band. I talk, you listen. You talk back, I listen. Data exchange was minimal,” Trahan explained.

“In 1992, Diamond Offshore adopted microwave technology for the Company's rigs in the Gulf of Mexico, essentially one phone. In 1994, we added dial-up modem capabilities, permitting electronic transmission of field requisitions. In 1996, we moved to satellite technology in the Gulf. This upgrade provided multiple phone connections and direct data communication, like email, web browsing, and access to corporate data systems. Between 1998 and 2004, the Company's rigs in the North Sea, the Pacific, and off the coast of Brazil were all upgraded to similar standards” he said.


“We installed our first Virtual Private Network in 1998, between Aberdeen, Scotland, and Houston. This was the beginning of high-speed global data exchange throughout the Company—and the end of regional isolation. And that is where we are today.”

### **Getting the right stuff**

Kevin Weiss, Electrical Supervisor for Domestic Operations, relates the selection process. “The Company has gone from radioing in to say, ‘all systems are go’ or ‘Houston, we have a problem,’ to planning, monitoring, and troubleshooting the Company's drilling operations over our network. This is basically remote administration.”

“How Diamond Offshore made the transition is not unlike how the Company has chosen to build its drilling fleet. Decisions are based upon the best combination of operational and economic parameters.”

“After Diamond Offshore made the move to satellite communications for the rigs back in 1996, the Company had to make a choice regarding its land based communications. We could build our own proprietary network from the ground up, or we could go with a Virtual Private Network using the Internet as a backbone. The proprietary network was a known, safe and expensive solution, but was not easily scalable. The Virtual Private Network solution was fairly new and untested, especially in the drilling industry. But the system promised more speed, was very scalable and inexpensive. Diamond Offshore could operate the network at about 15% of the cost of a proprietary system,” Weiss said.

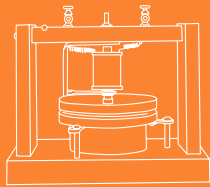
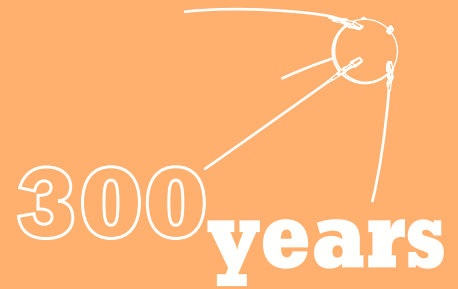
“None of this would have mattered if the Virtual Private Network had not served our purposes. But it did. When you fit technology to the objective, you take a lot of mystery out of decision making.” 



## Hurry up and wait

Isaac Newton was the first to articulate a satellite launch, sometime in the early 1700s. Notes found after his death included sketches of how, with enough gunpowder, a canon could propel a cannonball into orbit around the earth. 200+ years were needed to accomplish this feat (sans cannonball) with the former USSR's launch of Sputnik in 1962. Nearly another half-century passed before the technology became big business. Today, an estimated 150 communications satellites are in orbit connecting every part of the globe with every other part.

Change took: **nearly three centuries**



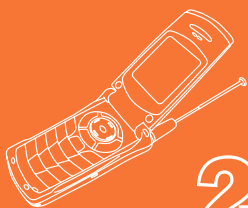
40 years

## Slow and steady

Alexander Graham Bell conceived the telephone in 1875. A year later, he produced one—to the enthusiasm of virtually no one. Western Union declined to participate. Big capital turned a cold shoulder. But then, little by little, local phone companies sprang up, attaching themselves to the main host, the future AT&T. Pole by pole, mile by mile, the system grew until finally, on January 15, 1915, Bell put in a call from New York City to his first assistant, Thomas A Watson in San Francisco. Long distance communication was a reality.

Change took: **four decades**

# For perspective on how fast communications technology is changing, take a look at history.



20 years

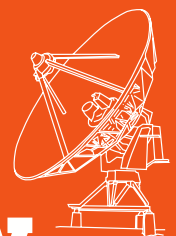
## Flash point

The first cellular phone system was established in the US in 1983. But even AT&T, who's Bell Labs gave birth to the idea in the 1940s, didn't know quite what to expect, projecting total users at fewer than a million by 1995. Hardly enough to build an industry around. They were low, but not by a lot. Then, in 1998 that same AT&T introduced flat rate calling plans and with them, cheaper, predictable costs. Boom. Today, cell phone users in the US number approximately 160 million—with hundreds of millions more worldwide.

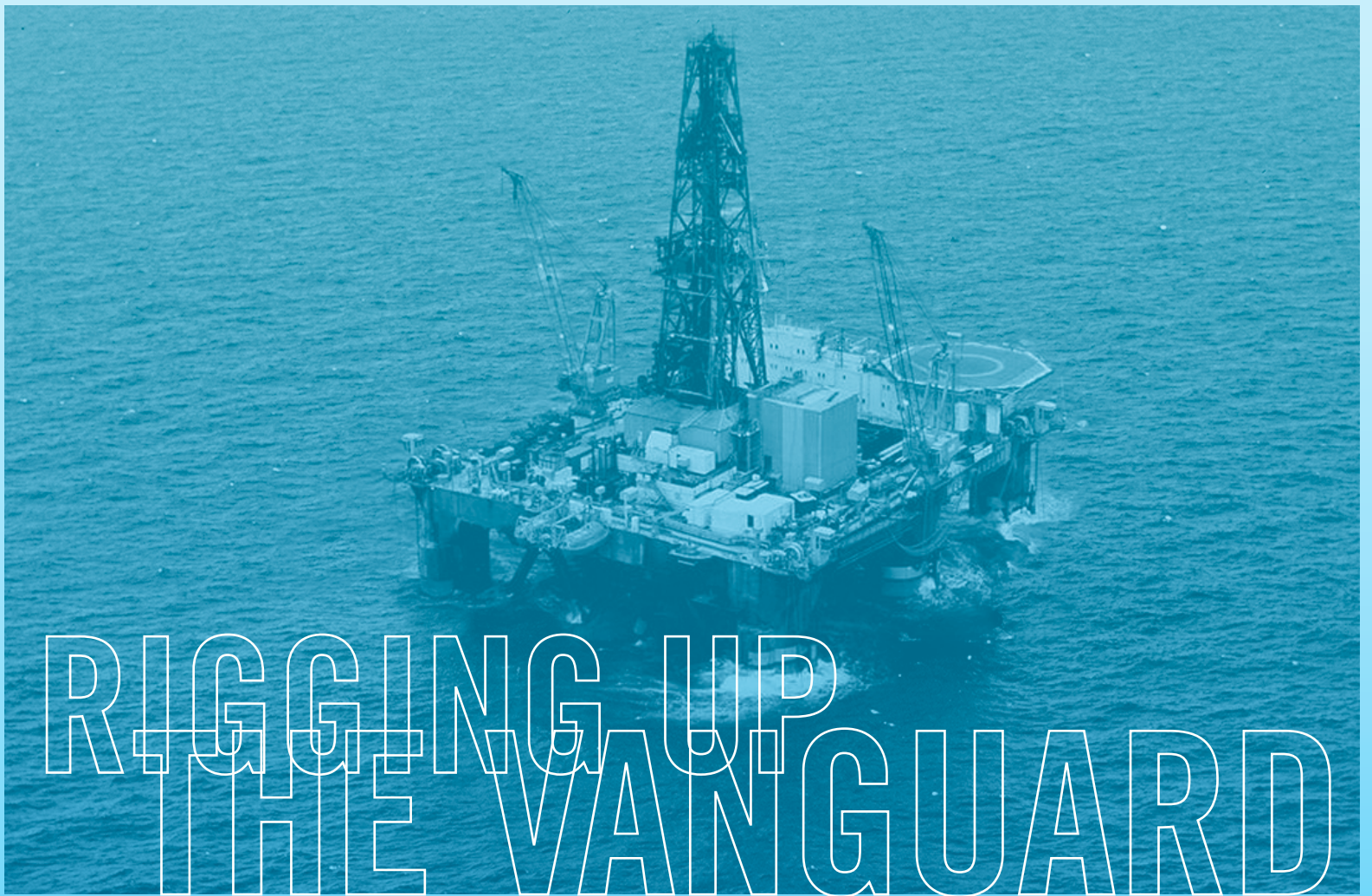
Change took: **about 20 years**

## And today

Voice Over Internet Protocol merging the phone and Internet; Wi-Fi technology that enables employees to access the company network from 36,000 feet in the air; a cell phone that, among other things, replaces your credit cards, opens doors, provides a boarding pass for air travel, and checks the contents of your refrigerator remotely (coming soon). Did someone say instant gratification takes too long?



now



# WHEN DIAMOND OFFSHORE BOUGHT THE THIRD-GENERATION SEMI-SUBMERSIBLE *WEST VANGUARD* FOR \$68.5 MILLION IN DECEMBER 2002, THE OBJECTIVE OF THE ACQUISITION WAS TO ADD TO DIAMOND OFFSHORE'S FLEET A SECOND RIG CAPABLE OF DRILLING IN THE ROUGH WATERS AND TOUGH REGULATORY ENVIRONMENT OF NORWAY.

Exploratory drilling on the Norwegian Continental Shelf was in decline at the time, with only 22 exploratory wells drilled by semis in 2003, down significantly from the 33 tests drilled in 2001. "We knew the market was down and would probably go down even more. But we also felt the market would not stay down indefinitely," noted Larry Dickerson, President and Chief Operating Officer. "The *West Vanguard*, which we have since renamed the *Ocean Vanguard*, was a good choice for our fleet. The rig was structurally sound. And the economics were in concert with our opportunistic strategy of acquiring equipment in down markets."

By late summer 2004, the market had turned positive. Twelve semi-submersibles were operating in Norwegian waters, up from 10 a year earlier. With only one rig in the region in cold-stack, this represented essentially 100% of the rigs built and approved to operate in these waters. And the forecast was much the same for 2005-2006.

## Why the change?

Richard Male, Diamond's Offshore Contracts and Marketing Manager for northwest Europe believes there are two primary reasons for the market improvement, "rising oil prices and government pressure to encourage operators to drill. Keep in mind that Norway's oil and gas industry contributes about 20% of the country's gross domestic product. Additionally,

demand in Norway appears to be sufficient to support at least two additional semisubmersibles. But there are no suitable rigs in the area that can be made readily available."

To those old enough to remember 1969—Woodstock, landing on the moon, and the Beatles' last public appearance—the current up-tick in North Sea activity may not rival the historic Ekofisk discovery that Christmas Eve. Still, the resurgence in drilling activity is good news, even by comparison to that seminal industry event.

Exactly 35 years ago this December, with enthusiasm for the energy search in the North Sea waning, Phillips Petroleum made the historic discovery. Conventional wisdom said that there was no sedimentary rock layer under the seabed between the UK and Norway. But after years of unresponsiveness, the North Sea finally yielded at Ekofisk in the Balder Field off Norway. And the oil and gas industry was born for the UK and Norway. The now retired *Ocean Viking*, owned and operated by Odeco, one of Diamond Offshore's predecessor companies, drilled that breakthrough discovery well.

Since Ekofisk, nearly 1,100 exploratory wells have been drilled, proving approximately 60 billion recoverable barrels of oil equivalent. Norway, according to the country's National Petroleum Directorate, is the seventh largest oil and gas producer in the world today—producing



3 million barrels of oil per day and some 2.5 trillion cubic feet of natural gas a year. Due to its small consumption, however, Norway ranks as the third largest oil exporter, behind only Saudi Arabia and Russia.

## The current tight supply

The current shortage of rigs approved for drilling in Norwegian waters is due, in part, to Norway's stringent workplace and environmental standards system of Acknowledgement of Compliance (AOC) for mobile rigs.

"As the *Vanguard's* new owners, we reapplied for an AOC in April 2003, as the necessary prerequisite to being granted consent to drill," Male explains. "Normal processing time for an application is three months, assuming the application has the expected content and quality required by Norway's Petroleum Safety Authority. This means the applicant must have carried out a satisfactory assessment of a rig's compliance with all health, environmental, and safety regulations, using accepted practices, analyses and verifications. There must be a complete list of deviations, with references to the regulatory requirements. Employee involvement in the process of preparing the application must also be documented."

The *Vanguard*, a Bingo 3000 design, was built at the Trosvik Verksted A/S shipyard in Norway in 1982. With the technical, organizational, and management systems designed specifically to comply with Norway's Norwegian Shelf rules, the *Vanguard* became one of the first rigs in Norway to be granted an AOC. Upgrading it had almost as much to do with Diamond Offshore's requirements and standards as with updates to the AOC.

"Before we began the upgrading process, the rig first embarked on a Special Survey. This is a mandated regulatory survey that calls for a complete and thorough inspection of the hull and appropriate ciety in accordance with their rules," Male says. "The survey gave us additional information on the vessel's condition—which was excellent."

The rig arrived at Invergordon, Scotland, on July 22, 2003, for an upgrade. Major changes included: upgrades to the units blowout preventer and riser tensioner systems; installations of a moon pool mezzanine deck and logging platform, and installation of a National SDI-120 Drilling Information System. Upgrades were also performed on the engine intake ducting and Woodward engine gover-

**Following reactivation, and before moving to Norway, the *Ocean Vanguard* drilled two wells in the U.K. sector of the North Sea for Talisman. Bob Dickson, Talisman's Drilling Manager, had the following to say about the rig: "The *Ocean Vanguard* has been an outstanding success. Two wells, including Talisman's first North Sea high-temperature/high-pressure well, have been successfully drilled within time and budget and most importantly with an outstanding safety record. This has been achieved with crews new to the installation, taking the rig out of stack and drilling and completing two technically challenging wells. This could not have been achieved without the commitment and leadership from the supervisors on the installation and back-up from onshore management. You have adhered to Talisman's philosophy of taking the time to do the job right, doing it right the first time and most importantly doing it safely. I know that you will maintain the high standard you have set yourselves [when you move to] Norway, and I look forward to being able to work with you again in the future."**

nors; and the lifeboats, anchors, and the engine room flooding system were replaced. As with the Company's other upgrades (see p. 2), this was far more timely and economical than building new.

Male notes that the biggest challenge with the *Vanguard* was sourcing information for equipment and maintenance upgrades and implementing Diamond Offshore's management systems, a challenge brought on largely by language differences. Nevertheless, huge amounts of data in Norwegian were successfully moved across to Diamond Offshore's document management system. Male attributes the achievement to the help of more than a dozen-and-a-half companies and people like Shannon O'Rourke (Project Manager), Shack Brooks (Operations Manager), John Hogarth and Dave Adams (OIMs), and Craig Beedie and Mark Lee (Rig Superintendents).

The entire process went smoothly, as evidenced by the E-mail Brooks received from the Cromarty Firth Port Authority in April 2004. "On occasions we have to highlight any lapses in working practices carried out by operators working in the Port. We try to [do] this in the most proactive way we can, as we can all learn lessons from our mistakes. Equally, it is important that we don't only give you feedback that is negative. When someone does a good job we like to highlight that also. You and your team must be commended on your approach to your project and the manner [in] which it was carried out. As


you know, we have an Environmental Officer who is employed to help you maintain a high environmental standard. With that regard, he stated that your project on the *Ocean Vanguard* was the best he has seen to date."

The first well the *Ocean Vanguard* drilled in Norway after completing its upgrade and certification was for ENI under demanding conditions: approximately 1,200 feet of water, with mud weights up to 16 pounds per gallon and bottom-hole temperatures of up to 332 degrees Fahrenheit. This is in significant contrast to the pioneering Ekofisk days, when most wells were drilled in less than 100 feet of water and none over 150 feet. The *Vanguard* is rated to drill in water depths of up to 1,500 feet, which places the unit in Norway's mid-range water depths. The rig is scheduled to begin a one-year contract with Statoil in Norway beginning early in 2005.

For Male, the outlook for drilling in this region is "very positive." His assessment is in keeping with that of the National Petroleum Directorate. The Directorate, established in 1972 to manage Norway's oil and gas resources, reported a 50% discovery rate among the 22 exploratory wells drilled in 2003. In a preliminary assessment, the Directorate attributed a 40% replacement of 2003's total production. In December of the same year, Norway announced its 18th offshore licensing round, the largest in terms of acreage since 1965.

While there has been considerable talk of maturing fields in recent years, the actions both of Norway and of exploration companies suggests a different picture. The context for this can be found in past and current geological data.

As guardian of Norway's oil and gas resources, the Directorate is responsible for evaluating the future of those resources, both short- and long-term. This the Directorate does annually. With less than 60% of the country's continental shelf opened to exploration, largely in the Norwegian and Barents seas, the Directorate readily admits that how much oil and gas is commercially recoverable is unknown. The Directorate's most recent estimate is approximately 13 billion scm of oil equivalent.

Pointing to Norway's long leadership role in developing oil and gas knowledge and technology, the Directorate believes that, even after nearly four decades of exploration and three decades of production, "Norway is still only at the beginning of the country's petroleum adventure." 





## ruminations

He's coming up on that near-perfect time of day on the open seas when sunlight starts to slant and soften and bright waters off Mexico turn deep blue.

Shift change. His chance to relax before settling in for the evening. What do you suppose this man's thinking about? Could be the weather. Weather's always a good bet anywhere, but especially out here. Especially this time of year. *Roxanne*. That was what they called that crazy hurricane that crossed Yucatan back in 1995 and swept right into these very waters. Did a lot of damage. Took a lot of lives. Standing here, right now, it's hard to imagine 30-foot waves and 100 mph winds. Even harder to imagine that after she passed and seemed headed for the US Gulf Coast, *Roxanne* actually turned and came back, all the way to Veracruz.

Of course, he could also be thinking even farther back, to 1519. What a sight it must have been to see those 11 little sailing ships on the horizon. Imagine the shock. You're a fisherman and you look up one day and see these huge billowy sails for the first time in the history of your world. And Spaniards.

No wonder Montezuma thought Quetzalcoatl had returned. Only it was Hernando Cortez. Cortez, who'd sailed from Cuba to Cozumel, then right through the Bay of Campeche headed for Vera Cruz and the Aztec capital at Tenochtitlan. Not unlike *Roxanne*.

Or maybe he's simply wondering what's for dinner over on the *Ocean Yorktown*?



**facets** NEWS AND VIEWS  
FROM DIAMOND OFFSHORE  
**RIGAMAROLE SPRING 2005**

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- 34** HEALTH AND SAFETY NEWS
  - 36** PEOPLE AND EVENTS
  - 38** LETTERS OF APPRECIATION
  - 40** DIAMOND OFFSHORE AROUND THE WORLD
-

# No warning. No problem.

SURPRISE IS PART OF WHAT MAKES THE INSPECTION PROCESS WORK IN OFFSHORE DRILLING.

**Unannounced inspections are nothing new in the offshore oil and gas industry. Annette Prewitt, Manager of Quality Control for Diamond Offshore, and the person directly responsible for developing and managing the company's Global Excellence Management System (GEMS), estimates that offshore rigs receive official visits by the US Department of the Interior's Minerals Management Service about once a month on average and always without notice. The unexpected visit is the norm of the inspection process. What is rare, however, is for the Environmental Protection Agency to show up on such a visit.**

On April 9, 2004, the Minerals Management Service arrived on the *Ocean Lexington* with four members of the EPA for an inspection tour. Unlike the typical Service inspection, the EPA team didn't concern itself with the *Lexington's* well operations, choosing instead to focus on two primary areas, environmental management and record keeping. For nearly four hours James Guidry, OIM on the *Lexington*, guided the group for a thorough inspection of the entire rig and review of records. Upon completion, the inspectors complimented the rig crew on their operations and issued Zero Incidents of Non-Compliance.

But even for a Company that has received as much acknowledgement and as many awards over the years for sound practices as has Diamond Offshore, there is a lesson in this. In Guidry's view, "The lesson is never take anything for granted, not even the smallest details, either in practice or documentation. We are fortunate in having a management system like GEMS, but GEMS is only as good as the use we make of it.

The best thing about the EPA visit was that the inspection verified that our systems really work and that we are not complacent in our use of them. We are consistent."

## MMS announces safety finalists

Only the best of the best become finalists in the much-anticipated Safety Awards for Excellence (SAFE) annual competition sponsored by the Minerals Management Service. Presented annually to Outer Continental Shelf (OCS) oil and gas operators and contractors who achieve excellence in safety and pollution prevention, the SAFE awards recognize that even complex and risky offshore oil and gas activities are being conducted with ever-improving levels of safety and environmental protection.

The 2003 SAFE finalists in the Drilling Contractor category were Diamond Offshore Drilling, Inc., Helmerich & Payne International Drilling and Noble Drilling (U.S.) Inc.

"This year's finalists make offshore energy facilities safer for everyone in the energy business," said Johnnie Burton, Director of MMS. "Offshore operators face enormous safety and pollution prevention challenges. **MMS salutes the efforts of these companies which work diligently to secure America's energy resources while raising the standard of safety and pollution prevention.** Established in 1983, the SAFE awards recognize and honor companies which make concerted efforts to train and motivate their employees to conduct offshore operations in a safe and environmentally responsible manner.

The award was ultimately presented to Helmerich & Payne. Diamond Offshore has previously won the award three times.



## Life-saving aid

OCEAN CONFIDENCE AND HER CREW RENDER AID  
IN MIDDLE OF THE NIGHT RESCUE

On a stormy November night, the *Ocean Confidence*, operating approximately 150 miles off the coast of Louisiana, received a call around 11:30 pm from a U.S. Coast Guard rescue helicopter seeking permission to land and refuel. The chopper's rescue mission at sea was more difficult and had taken longer than anticipated. **And the craft, with two badly injured people onboard, lacked enough fuel to make it back to land and faced the possibility of having to ditch at sea. The Confidence welcomed the crew, refueled the helicopter, and our certified Emergency Medical Technicians provided medical assistance as requested in support of the U.S. Coast Guard crew.** In the words of the helicopter pilot: "When I circled around the rig and got my initial glimpse of that massive, inviting helipad I exhaled and...the nervous feeling in the pit of my stomach went away immediately. The *Confidence* and all of her crew were a great comfort that night. Thanks again for being where we really needed you to be..."

"During the planning phase of this case we became aware of the location and capabilities of the *Confidence*. It was comforting to know that you were there but we really only figured you as a 'safety net.' We thought we had the fuel to complete the rescue and make it to the hospital. It became painfully obvious shortly after getting on the scene with the sailing vessel that you were going to be our primary refuel source. We landed on your rig with roughly 1/2 hour of fuel remaining. That may seem like a lot, but when you're still 150 miles off shore at night and have never seen your rig before you can imagine our concerns. When the *Confidence* started painting a big green blob on our radar and it coincided with your reported position we all had a great sense of relief...Thanks again for finding me and thanks again for being where we really needed you to be last Sunday night."



## Certified GEMS

ANNETTE PREWITT: MMS CORPORATE LEADERSHIP AWARD

In the 16 years since Annette Prewitt left the retail world and brought her degree in business management to Diamond Offshore, she has gravitated unerringly toward greater responsibility. Today, as the Company's Manager of Quality Control, Annette manages and develops Diamond Offshore's Global Excellence & Management System (GEMS), working with regulatory bodies and customers throughout the world in evaluating performance. She was instrumental in moving the system to an electronic format in 2000, making Diamond Offshore the first in the industry to do so.

In an arena—regulatory compliance—that could easily be contentious, she has helped focus on the common objectives of Diamond Offshore and the Minerals Management Service—safe, environmentally sound and efficient operations in the Outer Continental Shelf.

So her selection by the Minerals Management Service as a recipient of the "Corporate Leadership Award" for 2003 came as a welcome, if not altogether surprising, acknowledgement. And while she says, "I'm proud to work for a Company with a first class safety culture," she was happy to accept her award, in part because she thinks the recognition reflects well on the outstanding performance of Diamond Offshore rig personnel in the Gulf of Mexico.

In announcing the award, Willis (Brent) Elliott, inspector for Offshore Minerals Management in the Lake Charles District of the Gulf of Mexico Region, had a great deal to say, both general and specific about the way his agency works with Annette and Diamond Offshore. Describing Diamond Offshore as

**"...an exemplary drilling contractor... proactive in promoting employee safety, addressing safety concerns...ensuring compliance...and demonstrating willingness to work..." with the Minerals Management Service, Elliott singled out Annette for taking an exceptionally positive approach to the regulatory process.**

"[She] is always willing to resolve any issues... follows up and always notifies the Minerals Management Service when the problem has been resolved and...the extra steps that have been put in place...then passes this information on to personnel on other rigs to ensure [they] do not occur elsewhere," Elliott said. He added, **"...due to the hard work of Ms. Prewitt and Diamond Offshore's offshore installation managers and rig personnel, the Company set a new company safety record 2003.** Diamond Offshore's total Recordable Incident Rate was 1.47. The Company's Minerals Management Service Incidents of Non-compliance rate...was .077. This exemplary attitude toward safety and compliance helps Service inspectors do their jobs better."

The Minerals Management Service created the Corporate Leadership Award in 1999 to recognize "individuals who perform an act or service for Minerals Management Service programs to enhance" the organization's ability to meet its objectives. Candidates are nominated by Service employees. Part of the U.S. Department of the Interior, the Service was formed in 1982 to, among other things, manage on behalf of U.S. taxpayers the mineral resources on the nation's Outer Continental Shelf in an environmentally sound and safe manner.

# Best Practices

MOE PLAISANCE: IADC DRILLING CONTRACTOR OF THE YEAR



When the “best practices” guidelines for surface stack blowout prevention operations were issued by the International Association of Drilling Contractors in the latter part of 2004, they had on them a very familiar imprint, that of Moe Plaisance, Diamond Offshore’s Vice President of Operations Support. As a member of the steering committee responsible for designing the guidelines, Moe is once again doing what he does so well: help develop technical know-how for use throughout the offshore industry.

**efficiency within the drilling industry.”** It is sponsored by Grant Prideco’s Reed-Hycalog and the contractors association.

If ever there were a poster-boy for “lifetime achievement” in this business, Moe is that person. He started out in drilling almost 38 years ago and has worked most of his life with Diamond Offshore or a predecessor company. He has done it all—roughneck, driller, tool-pusher, management, mentor—in every region of the world. He has seen the industry change and he has been instrumental in that change. And in a very real sense, his career goes back even farther than his official three and half decades.

Moe loves drilling and he loves to teach others how. He chaired the International Associations’ Deepwater Well Control Task Force in 1998, and was Chairman of the Society of Professional Engineers/International Association of Drilling Contractor’s 2004 Drilling Conference. He was in Mexico earlier this summer helping train eager, appreciative, and quick-to-learn Mexican offshore workers in what he refers to as his special subject, “Floating Drilling 101.”

Both his father and grandfather, along with uncles and brothers, were also in the drilling business. His stories and memories go back to the age of 10, when his Dad was a drilling superintendent.

“I guess that I could conceive of no more exciting or rewarding a career than being a drilling hand,” he has said, with the most rewarding part being “working with the people associated with this business.”

In bestowing Contractor of the Year honors on Moe, the International Association of Drilling Contractors seemed to say much the same.

This unselfishness helped lead the contractors association to a unanimous vote in naming Moe as Contractor of the Year. **The award recognizes “outstanding lifetime achievements in technical innovation, safety and economic**

2000. They had seen two tough years in ’01 and ’02, with a 19 and 7 record. And people wondered—were the Tigers back? They were. After the initial loss, the Katy Tigers won 14 straight games, beating all Houston and San Antonio area teams and headed for the final state showdown.

Late last year, the Katy Tigers, a two touch-down underdog to the high octane offense of Dallas area’s South Lake Carroll, once again made their mark in history, this time before an estimated crowd of 10,000 in the Alamo Dome in San Antonio. Contributing to the success

and performance of the Katy Tigers was the tremendous support of the band, drill team and fans of the Katy Area. Other Katy Tiger employee kids involved in the success were Nicolas Hoy, Eric Crabtree, Ashley and Colin McGowan, and Maegan and Ryan Carlisle.

Katy opened this year’s season in the Reliant Stadium staging the first high school game to be played in the home of the Houston Texans professional football team and last year’s Superbowl. At this writing, the Tigers have won their District and are moving into the finals hoping to capture yet another state title.



34

PAUL THORNTON

49

DERRICK TRICHE



KATY

## State champs

DIAMOND OFFSHORE FAMILY AND FRIENDS  
SUPPORT KATY TIGERS TOWARD STATE VICTORY

Once a sleepy farming community on the slate-flat prairie 30 miles west of downtown Houston, today, along with its familiar rice fields, Katy, Texas, has been enveloped by affluent commuters and the hum of big city sprawl. The Dairy-Queen is no longer the center of the social universe for Katy high-schoolers, like it was in 1959 when the Katy Tigers won the Division 1-A championship. But one constant remains. If it’s Friday night in Texas, it’s time for high-school football. And today, we’re talking serious football. Widely known for Class 5-A Division I & II (these guys could beat some college teams) football, Katy High School has become a powerhouse over the last 10 years, producing three state football titles in 1997, 2000, and 2003.

Several of the Houston office employees have kids who have been fortunate to be a part of this recent winning Katy tradition. Derrick Triche, at middle linebacker, and Paul Thornton, outside linebacker, both have state championship rings to prove it.

Last year, the season didn’t begin well. The Tigers got roughed up 35-14 by Lufkin, and it looked like they might not yet have returned to the form that saw them go 59 and 3 from 1997-

# Ocean Guardian: Shell Floater Rig of the Year

**The *Ocean Guardian*, operating under term contract to Shell International Exploration and Production B.V. in the U.K. sector of the North Sea, has been designated as the Shell Floater Rig of the Year and received the Ammonite award, together with a Shell Pecten shield to display on the rig. The *Guardian* won the award out of 16 semisubmersibles and drillships that were contracted to Shell in 2004, many of which are long-term hires.**

Highlighting the reasons behind the selection, Shell Global Category Manager—Drilling Rigs for Shell International noted the Key Performance Indicators:

- Total Rig Performance Factor: 1.86 out of 2.00.
- One year with 0.00 Total Recordable Case Frequency.
- Notable consistency and superior operational performance.
  - Key projects were executed by the rig on time and within budget/plan.
- One of the best embedment of DtL (Drilling the Limit) by a rig team, which is the fundamental reason for the excellent Health, Safety, Environment and Operational performance.
- People—Team oriented, view themselves as an extension of Shell, true hearts and mind culture.



## Ocean Guardian

SWIFT ACTION SAVES TIME AND MONEY

The *Ocean Guardian* semi-submersible drilling rig successfully completed the Howe well and left the field at 20.00hrs on Friday 30th April.

The well has been completed to plan on schedule and budget...But probably the best news of all was that it was completed without any injuries or LTIs...

The well hit all of its targets and the reservoir is believed to be at the top end of expectations from the logs run. It has not been well tested to the rig so we will have to wait...before we can confirm its true potential.

**I would like to take this opportunity to formally thank the team on the *Ocean Guardian*, both offshore and onshore, for their great efforts on the Howe well. I made two visits out to the rig during the work on Howe and was extremely impress with the cultural attitude towards doing a very good job for "their customer" and doing it safely—I can say that it truly was a team effort by all members of the crew, whatever their role.**

Well done to the *Ocean Guardian*!!!

**Nigel George**

Howe Project Manager, Shell Oil Company

## Ocean Guardian

WINS SHELL 2004 ENVIRONMENTAL AWARD

In addition to Floater Rig of the Year, the *Guardian* received recognition for its environmental performance. In presenting the award Shell noted:

There were four submissions in total, representing the efforts of Brent Brave, Brent Delta, North Cormorant and the *Ocean Guardian*. The panel unanimously decided to award the £5000 to the *Ocean Guardian* team.

The panel was particularly impressed by the OG submission with respect to their specific environmental input into the AFS briefings:

- Focus on all spill team recommendations;
- Trial of new technology to improve overall environmental performance;

- Rig dedicated environmental teams;
- Combination of hardware, people and procedural factors to help both prevent and mitigate spills.

The panel would like to thank Bravo, Delta, NC and the OG for submitting their applications and the way in which they have all contributed and shared their best practices.

Congratulations of course go to the OG team, both offshore and onshore, for their outstanding efforts.

Thanks to the efforts of all of our rig teams Well Engineering has seen a reduction in both the overall volume of oil to sea and the number of scorecard spills. Well done!



## Ocean Rover

### EXCEPTIONAL INSPECTION RESULTS

We attended onboard the semi-submersible drilling rig *Ocean Rover* to conduct a limited condition survey of certain primary equipment installed, including drilling, marine, power plant, electrical, safety, and a limited dropped object inspection of the derrick and substructure.

During the inspection of the primary equipment installed, corresponding reviews were carried out on all the equipment maintenance records and certification to ensure that equipment was maintained as per manufacturers' recommendations and that it was fit for the purpose intended, the location and the present area of operation.

Prior to the commencement of the survey a meeting was held with the Amerada Hess drilling supervisor, the purpose and the scope of the survey was detailed, as follows: to conduct a acceptance type survey with a heavy emphasis on safety, this was achieved by following our own inspection standards, and an Amerada Hess safety inspection check list.

**The rig in general was maintained to a very high standard. The cosmetic appearance was a testament to the high standard of maintenance and attention to detail. Good housekeeping and the continuing strive towards maintaining a safe reliable working environment was clearly evident.**

Taking into consideration the advice and guidance provided during the survey and in the report and by addressing the observations and corrective actions listed, we believe, that the *Ocean Rover* drilling rig will be capable of executing any drilling program within her design parameters in a safe, reliable and efficient manner.

We would like to express our gratitude and thanks to the crew and management for their cooperation and assistance during our survey, which was carried out during the drilling operations.

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#### Derrek Simpson

Rig Surveyor  
Rig Survey International

## Ocean Star

### SUPERIOR PERFORMANCE FOR KERR-McGEE

The semisubmersible Drilling Rig, *Ocean Star*, began working for Kerr-McGee in August 2002 and continued working into January 2004. During this time the *Ocean Star*, drilled and/or completed 14 wells in our Boomvang, Nansen, Gunnison, Hornet and Redhawk projects.

**The Total Recordable Incident Rate during this period was 1.63. This is an outstanding accomplishment considering that employees logged 492,000 man-hours. In addition to an exemplary safety performance. Each of these accomplishments, collectively and independently, underscores the team's superlative effort.**

Operational performance is another area worthy of recognition. The wells were drilled and/or completed 117 days or 19.40% ahead of AFE curve. Beating the curve means stretch goals become more of a challenge. *Ocean Star*, employees were eager to accept the challenge. Kerr-McGee becomes the benefactor of streamlined accounting of days and actual dollars spent. The spend was 11.1% less than AFE amount for the 14 wells, even after adjusting cost for good performance. Your efforts helped Kerr-McGee meet the goals we have set for the company and also impact the way our peers and government regulators judge us.

Kerr-McGee was pleased to celebrate with the employees of the *Ocean Star*, their accomplishment of 1,976 days or 5.41 yrs of "no lost time" injuries. We applaud the fine efforts of all those who contributed to the achievement of this milestone.

We would also like to thank everyone who participated in formal rig safety audits and inspections. Tremendous support was obvious from the rig-based personnel. Upon each inspection, the rig was found to be in excellent condition, with very few exceptions. In the rare instances when we noted areas for improvement, the rig personnel quickly responded to our suggestions.

Again, we are pleased and honored to work with Diamond Offshore and its employees! We look forward to working with the *Ocean Star* on future projects.

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#### Mike Stockinger

Vice President, Drilling  
Kerr-McGee Oil & Gas Corporation

#### Gerald Courville

Senior Drilling Superintendent  
Kerr-McGee Oil & Gas Corporation

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#### Todd Durkee

Operations Manager  
Kerr-McGee Oil & Gas Corporation

#### David C. Harris

Completions Engineering Manager  
Kerr-McGee Oil & Gas Corporation

## Ocean Patriot

**QUICK THINKING, GOOD RELATIONSHIPS & GREAT TEAMWORK OVERCOME OBSTACLES**

At this time the shaft has been welded with gussets and operations are continuing. We have made up the next joint of casing and have slacked off “free as a bird” according to Doc McCoy, Forest Drilling Operations Supervisor on the Diamond Offshore *Ocean Patriot*. We will continue running the casing. The wellbore is pretty much in gage according to the calliper and the mud system is stable as noted during the logging operations having been off bottom two separate times for 52.5 and 46.5 hours. We should be able to get the casing to bottom. We will continue operations until we cannot or the replacement part is on the rig. The personnel involved were:

WELDERS: Thomas Hendricks and  
Thomas Kayster  
MECHANICS: Colin Henderson &  
Barry Goodwin  
OIM: Ron Watts  
RIG SUPT: Calvin McCabe  
TOOL PUSHER: John Lewis  
DRILLERS: Dave Andrews & Troy Williams

**Our good relationship with Diamond and confidence in our team enables overcoming problems such as this.** Whereas we are not on bottom as yet nor have we completed the project. I am very proud of these men and proud of our team.

This may be excessive, however, I mean every word.

**Spike Phillips**

GA Phillips

## Ocean Crusader & Ocean Lexington

I was part of a small group that visited the *Ocean Crusader* and *Ocean Lexington*. As you know, they are working for Walter Oil and Gas. Those on the trip included Jim Locke, Dennis Gregory, two contractors and two student interns Schlumberger has from the UT Walter PE program. (I believe you also have two.) As always, your rigs are in great shape. But more important **I would like to compliment you and your company for the attitude that I see in each employee. They are always professional and friendly.** “Jr.” gave us a wonderful tour on the *Crusader*. Dennis was a proud “papa” of his *Lexington* and also took time to make sure the students had a look from top to bottom. Well almost, we did not climb the derrick.

Schlumberger is honored to have equipment on Diamond Offshore rigs. We too strive for the safe work environment that I see exhibited by Diamond Offshore. Again, thank you and I look forward to seeing you again.

**P.K. Caldwell**

Global Account Manager  
Schlumberger

## Ocean Quest OUTSTANDING SAFETY, NON-INJURY WORK DAYS

The DWP Leadership Team would like to thank the management and crew of the *Ocean Quest* for their outstanding HSE and operations performance on the Troika TA-6 Intervention. **Despite the numerous lifting operations and rigging up and rigging down of heavy equipment in tight spaces, all while operating on a moving platform, the work was performed with no HSE incidents! This is a tremendous accomplishment and a real tribute to the thorough planning and commitment to safety in all aspects of the operations.**

In addition, the project was delivered under schedule and under budget and proves an efficient operating rig is a safe operating rig. A special thanks to the management and crew for participating in the offsite planning for this project. Your dedication and commitment was truly the cornerstone of this projects’ success. Thanks once again for an outstanding delivery.

**Kenny Lang**

VP—Gulf of Mexico,  
Deepwater Production  
BP America

**Dan Replogle**

Performance Unit Leader  
BP America

**Michael Leary**

DWP Wells Manager  
BP America

## Ocean Quest SUPERIOR PERFORMANCE FOR MURPHY EXPLORATION

On behalf of Murphy Exploration & Production Company, I would like to offer our sincere appreciation to the crews of the *Ocean Quest* for their outstanding efforts on our Front Runner Development project and the recent exploration well at Mississippi Canyon 538.

**The crews worked very hard to help us achieve our objectives on time and under budget in areas where there were many drilling hazards and many technical challenges.** The Murphy Exploration drilling

supervisors continually compliment the DODI team not only for the excellent progress but also for all the daily operational guidance provided by the crews.

Thanks again to the crews of the *Ocean Quest* for the outstanding effort. Our drilling supervisors and all members of Murphy's drilling staff look forward to future deepwater exploration projects with the *Ocean Quest* drilling team.

## Ocean Warwick OUTSTANDING SAFETY, NON-INJURY WORK DAYS

Applied Drilling Technology, Inc. (ADTI) would like to congratulate you and your crews on a job well done. **The proposed work scope was performed in a very professional and efficient manner without incidence to either personnel or the environment.**

We are happy to award a maximum bonus of seven days as prescribed in the ADTI Well Incentive Plan which will be distributed within the next 3-4 weeks. We look forward to working with you again on future projects if the opportunity presents itself.

### Charles Cambron

Operations Manager, Applied Drilling Technology

## Ocean Rover BEATING THE GOAL

On December 18 of last year I put forth a very aggressive drilling goal of drilling our next three wells by February 15, 2004. I called the goal—3 by 15—February with No Accidents.

I would like to congratulate the team for blowing the goal away. Not only did our team drill the wells with ease but you now have an opportunity to drill a fourth well to the objective section by the original goal date of February 15. Drilling these wells by the February 15 date was crucial to the development schedule. This goal was accomplished by pushing the envelope on our conventional thinking, enhanced planning, safety awareness, and benchmarking.

I would like to personally thank all the team members including our office staff, rig

supervisors, Diamond Offshore leadership team, Diamond Offshore rig based personnel, shore base team, and service providers both in the field and in the office.

**The rig based team also had exceptional safety performance during this period proving that excellent safety awareness leads to better planning and then to outstanding drilling results. In other words safe rigs are the best rigs.** Thanks again for a job well done.

### Roger W. Jenkins

Operations Manager, Murphy Sabah Oil Company

### Joe Bob Wycough

Vice President Operations,  
Murphy Sabah Oil Company

## Operating safely down under

I wish to inform all that the APPEA (Australian Petroleum Production and Exploration Association)—IADC—Australian Chapter "Category C"—Offshore Drilling Contractor Safety Award for 2003 has been awarded to Diamond Offshore for the second year in a row. This award was present to John Atkinson today representing Diamond Offshore at the APPEA Conference in Canberra today.

**This award is "in recognition of a superior safety record in the petroleum exploration and production industry and for a significant contribution to promoting a safe and healthy work environment."**

**This award is for the excellent achievements of all the crews including shore based support and all third parties involved for the two rigs that Diamond Offshore operated in Australian waters during 2003, the *Ocean Bounty* and *Ocean Epoch*.** WELL DONE! It must be noted that three company's achieved no lost time incidents for 2003, which meant the award was decided on the number of RDC's recorded. Listed below are the other offshore companies who have won this category before in the past, how many times they have won the award and the years they won the award:

Lasmo Australia (1) 1987

Shelf Drilling (1) 1988

Atwood Oceans (3) 1989, 1996, 1997

Sedco Forex (1) 1992

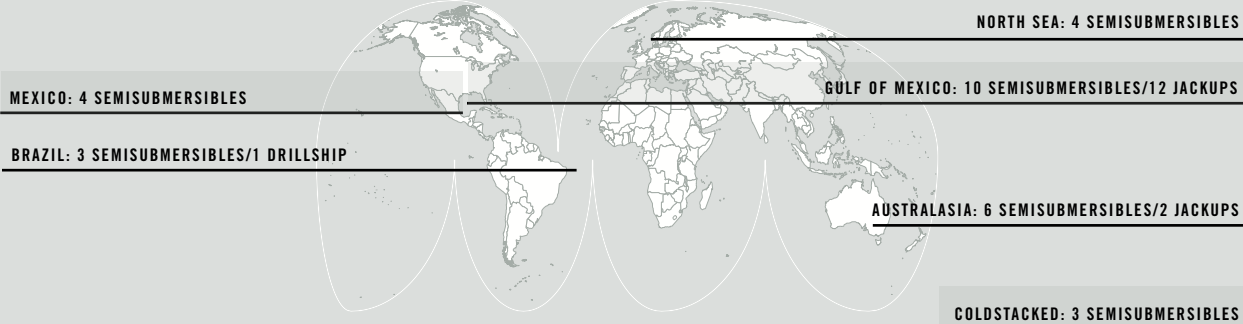
Sundowner Offshore (2) 1993, 1994

It'n'l Sea Drilling (3) 1998, 1999, 2001



# Areas of operation

DIAMOND OFFSHORE OPERATES 45 RIGS IN 11 COUNTRIES



## Rigs and locations

DIAMOND OFFSHORE'S RIGS BY TYPE AND LOCATION

### SEMISUBMERSIBLES

Ocean Confidence	7,500	DP; 15K; 4M	GOM—US
Ocean America	5,500	SP; 15K; 3M	GOM—US
Ocean Star	5,500	VC; 15K; 3M	GOM—US
Ocean Valiant	5,500	SP; 15K; 3M	GOM—US
Ocean Victory	5,500	VC; 15K; 3M	GOM—US
Ocean Quest	3,500	VC; 15K; 3M	GOM—US
Ocean Voyager	3,200	VC	GOM—US
Ocean Concord	2,200	3M	GOM—US
Ocean Lexington	2,200	3M	GOM—US
Ocean Saratoga	2,200	3M	GOM—US
Ocean Worker	3,500	3M	Mexico
Ocean Yorktown	2,850	3M	Mexico
Ocean Whittington	1,500	3M	Mexico
Ocean Ambassador	1,100	3M	Mexico
Ocean Guardian	1,500	3M	North Sea
Ocean Princess	1,500	15K; 3M	North Sea
Ocean Vanguard	1,500	15K; 3M	North Sea
Ocean Nomad	1,200	3M	North Sea
Ocean Baroness	7,000+	VC; 15K; 4M	Indonesia
Ocean Rover	7,000+	VC; 15K; 4M	Malaysia
Ocean Epoch	1,640	3M	Australia
Ocean General	1,640	3M	Korea
Ocean Bounty	1,500	VC; 3M	Australia
Ocean Patriot	1,500	15K; 3M	Australia
Ocean Alliance	5,000	DP; 15K; 3M	Brazil
Ocean Winner	4,000	3M	Brazil
Ocean Yatzy	3,300	DP	Brazil

### INTERNATIONAL DRILLSHIPS

Ocean Clipper	7,500	DP; 15K; 3M	Brazil
<b>JACKUPS</b>			
Ocean Titan	350	IC; 15K; 3M	GOM—US
Ocean Tower	350	IC; 3M	GOM—US
Ocean King	300	IC; 3M	GOM—US
Ocean Nugget	300	IC	GOM—US
Ocean Spartan	300	IC	GOM—US
Ocean Spur	300	IC	GOM—US
Ocean Summit	300	IC	GOM—US
Ocean Warwick	300	IC	GOM—US
Ocean Columbia	250	IC	GOM—US
Ocean Champion	250	MS	GOM—US
Ocean Crusader	200	MC	GOM—US
Ocean Drake	200	MC	GOM—US
Ocean Heritage	300	IC	India
Ocean Sovereign	300	IC	Bangladesh

### COLD STACKED

Ocean Endeavor	2,200	VC	GOM—US
Ocean New Era	1,500		GOM—US
Ocean Liberator	600		South Africa

### KEY

DP=Dynamically-Positioned/Self-Propelled  
 IC=Independent-Leg Cantilevered Rig  
 MC=Mat-Supported Cantilevered Rig  
 MS=Mat-Supported Slot Rig  
 VC=Victory-Class  
 SP=Self-Propelled  
 3M=Three Mud Pumps  
 4M=Four Mud Pumps  
 15K=15,000 PSI Well Control System



# rigamarole

spring 2005



DIAMOND  
OFFSHORE

