RIGAMAROLE

WINTER 2015 ISSUE NO. 34
A PUBLICATION FOR THE PEOPLE, CUSTOMERS, SUPPLIERS
AND FRIENDS OF **DIAMOND OFFSHORE DRILLING, INC.**

WINTER 2015 ISSUE NO. 34

RIGAMAROLE

RIGAMAROLE is published for and about the people and customers of Diamond Offshore. For more info, write us, call or visit www.diamondoffshore.com.

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A LETTER FROM MARC EDWARDS

President and Chief Executive Officer

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LION'S PRIDE

A CREW COMPLETE.

WRITTEN BY *SCOTT REDEPENNING*
PHOTOGRAPHY BY *CHRIS SHINN*

In 2011, Diamond Offshore contracted with Hyundai Heavy Industries to build a state-of-the-art, ultra-deep-water drillship—a 754-foot marvel of modern drilling technology that was christened the Ocean BlackHawk. Over the following months the company ordered three more drillships of the same design, the Ocean BlackHornet, Ocean BlackRhino and Ocean BlackLion. The systems on these 6th generation vessels are among the most advanced ever seen in the drilling industry. Diamond Offshore would have to find very specialized individuals to work these massive ships, and a lot of them, in a short timeframe. The company had never undertaken a crewing challenge of this magnitude or complexity.

"THE INTEREST WAS VERY HIGH... MANY PEOPLE IMMEDIATELY SAW IT AS A GREAT OPPORTUNITY TO BE ON A RIG OF THE FUTURE."

Now the job is almost finished. The first three drillships are crewed up and working in the Gulf of Mexico, with the *BlackLion* set to begin operations around year-end 2015. With many of Diamond Offshore's best-trained people already working the first three ships, crewing the fourth was the toughest challenge of all. But if you ask anyone onboard, they're likely to inform you that the *best* of the best, just perhaps, were saved for last.

On May 26th the *Ocean BlackLion* fired up her engines and became the fourth Diamond Offshore newbuild drillship to leave Ulsan, South Korea in its wake. Hyundai Heavy Industries (HHI) shipyard had completed the build and turned the keys over to Diamond Offshore. At long last, the vessel was in the capable hands of the newly minted *BlackLion* crew. But before this moment could happen, one must travel back in time about four years, when the new drillships were blueprints on paper instead of iron in a shipyard.

Karen Roll is Manager of Staffing Services for Diamond Offshore. When the announcement was first made that the company would be building new drillships, her position was created. The challenge placed before Roll and her team—find more than 800 exceptionally qualified people, about 206 per ship, and get them ready to operate these new rigs ahead of their deliveries from the shipyard. The apparent first step was to start at home.

"We are very much a promote-from-within company, so we got most of our people internally," says Roll. "The first thing we did was send a message out to the whole fleet that said, 'If you're interested in working on one of the new drillships, please complete this one-page questionnaire.' " The questionnaire was simple, asking why the applicant should be considered and what special skills he or she would bring to successfully operating a 6th gen vessel. The response? Roll cocks her thumb at a stack of completed questionnaires standing two feet high in the corner of her office. "The interest was very high. We got more questionnaires back than we needed. Many people immediately saw it as a great opportunity to be on a rig of the future."

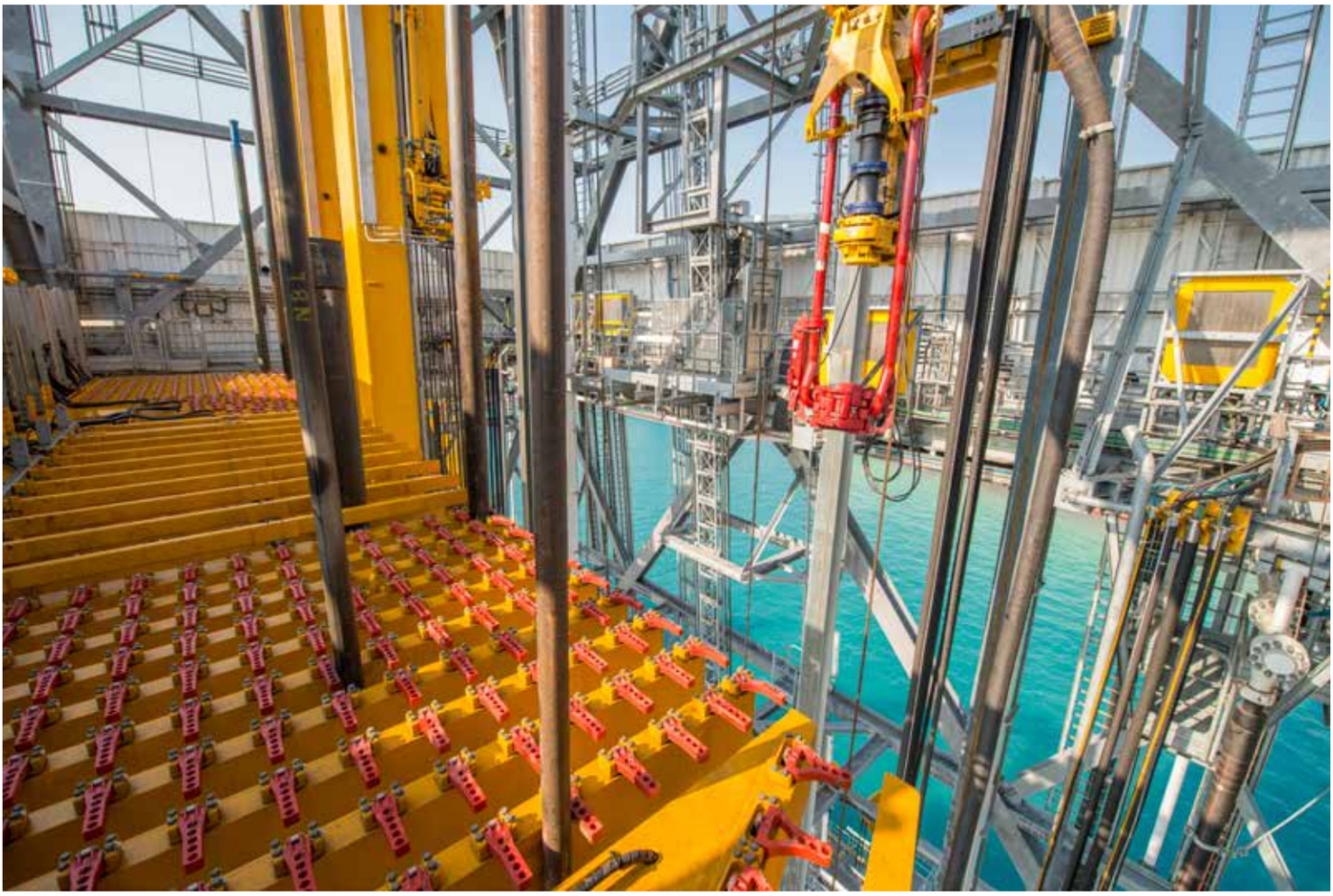
Next, each completed questionnaire was paired with the applicant's CV, and all of this information was pushed out electronically to the rig managers, so they could see the pool of talent that was available for each key position. For many Diamond Offshore personnel, the timing of this call for applicants couldn't have been better. The company was in the process of taking some of its older rigs out of service and selling off others. The crews on those rigs were facing an uncertain future when that questionnaire hit their inbox.

"With some of our rigs being cold stacked, we wanted to make sure we did not lose good talent," says Roll. "So we did everything in our power to retain them. We tried to approach the crewing challenge from a big-picture perspective, but this is difficult because things are constantly and quickly changing, especially right now. One minute a rig is moving to a new country, another is being cold stacked, another is being sold, another is coming out of the shipyard. So we deal with this by using only the most current information and addressing the most immediate need."

BALANCING ACT

Although Roll's job was created to respond to personnel needs on the drillships, her responsibilities reach out to every rig Diamond Offshore owns. Her team has to make sure that

KAREN ROLL
Manager of Staffing Services



during the crewing process, the experience and skill levels are still balanced across the entire working fleet. Imagine you're a coach on a winning team, and suddenly you're told that you will be losing your key players. Diamond Offshore wasn't going to do that to rig managers who were out there working hard for current clients.

"There was some hand picking of people, but we have to referee that," says Roll. "We couldn't allow any rig to be stripped of all the talent it needs to operate. Those managers wanted to protect their good people. So every request for a drillship position had to go to the Operations VP level to make sure the transfer would not leave a talent void. We tried to maintain a balance, but crewing the drillships was a company priority. We didn't want to take too much experience away from working rigs, but we also couldn't send all new people to the ships."

While the majority of drillship crewmembers came from within, outside recruitment was necessary as well because Diamond Offshore was entering new territory, operating drillships versus traditional rigs. Each ship requires eight crewmembers who hold the full U.S. Coast Guard Unlimited AB license with RFPNW (Ratings Forming Part of a Navigational Watch). No other Diamond Offshore rig has this requirement, so they were all outside hires.

Stuart Utting is Operations Manager for the *Ocean BlackLion*. He says that while Diamond Offshore has traditionally been a popular employer in the offshore industry, finding these outside people was not easy. "For the new hires, we had to get the word out in the market and advertise that we were looking for good people, particularly in the engineering and

marine departments, which are positions that hold special licenses. These people are in very high demand because there are many dynamically positioned type vessels being built right now. But we've been able to attract some great people."

Being the fourth drillship to be crewed, the *BlackLion* may appear to be at a disadvantage in securing the best people out there. On the contrary, being fourth has some distinct benefits over the others. Building and crewing the first ship, and to some degree the second and third, were a learning process. By the time HHI began to cut steel for the *BlackLion*, Diamond Offshore had already worked through the surprises, challenges and growing pains, and now pretty much had the crewing process down cold.

The first three ships were also a perfect training ground for personnel who were being groomed to move to the *BlackLion*. Several key positions on these vessels were strategically overstaffed. For example, six subsea hands were hired to work on the *BlackHawk*, knowing that two of them would go to the *BlackHornet* and two to the *BlackLion*. This purposeful cascading of crewmembers was vital on several fronts says Utting. "We put people earmarked for the *BlackLion* on the other ships very early. They were there during the building phases and into delivery, commissioning, integration testing and finally the full-on drilling operations. They are being trained up with the express purpose of bringing that experience to this ship. This has made it much easier to guide the *BlackHawk* through all of those same phases, from building to drilling."

BUILD THE SHIP, BUILD THE CREW

While the ultimate crew count for the *BlackLion* encompasses more than

200 people, the buildup to that number was deliberately restrained. In short, the right people were brought in at the right time during the building process. This allowed key personnel to be involved while their particular part of the rig was being built, so they could give input, gain ground-level knowledge, and better prepare themselves for later operations.

The crew-up happened in four waves. First in were the top maintenance people—those in charge of keeping the various equipment systems running. They were there early while the guts of the ship were still exposed, so they know how every machine and controller is put together and where every wire goes, derrick to keel, bow to stern. Daniel McLaughlin is Chief Engineer on the *BlackLion*, and he was the first one in, arriving about a month before the keel was laid. Since then he has overseen every stage of construction and will do every inspection until the rig is commissioned. McLaughlin is in charge of every system on board from a mechanical and maintenance standpoint, but until the rig is delivered and leaves the Hyundai shipyard, his role is strictly observational. He's more than a little antsy to get his hands dirty.

"While HHI is building the ship we aren't allowed to touch anything. Right now we are just pestering them to do all of our work for us. Once we get control of the ship, it's going to get much more intense," he says. "The biggest challenge is the newness of the vessel. There are only three other ships like this in the world. So we are absorbing the manuals, trying to prep our brains. We don't know what we don't know, so we have a lot to take in. Hopefully we can use all of our past experiences to help predict the future on what to expect." McLaughlin adds that those three other ships have been valuable for setting expectations. "We liaison with the other ships quite often. We were in the shipyard at the same time for a while, so there has been a lot of information passed down. Plus, we are getting most of our crewmembers from those ships."

The second wave of crew sent to the *BlackLion* consisted of about half the key operational positions such as toolpushers, drillers and dynamic positioning operators. The third group rounded out the other half of these positions along with the ship's captains/offshore installation managers (OIMs). Fourth in line came the people who did not need specific drillship training, such as roustabouts and floor hands. Getting this last group lined up was particularly challenging because they could not come until Diamond Offshore took delivery of the ship from HHI, and that date, as is typically the case, kept getting pushed back. But, says Karen Roll, you still have to have all your crewmembers ready for the earliest possible date.

"Diamond Offshore did something that I believe made the crewing process successful and more rewarding for the employees," she says. "Because of all the specialized equipment, the crew had to go through three months of drillship-specific training. So there was a three-month period where they were released from their current rig and were able to dedicate themselves completely to training before reporting to the ship in South Korea. This had to be meticulously coordinated so each group was ready to report on time and the training facilities were ready for the next wave. I know, because I personally worked with our Training Department to make a calendar for every employee to show them where to be, when to be there, and what they would be working on."

“THE ATTITUDE ON THIS PROJECT HAS BEEN GREAT. WE ARE ALWAYS INCLUDED IN THE DECISION PROCESS. THIS KIND OF TEAMWORK IS ESSENTIAL FOR WHAT WE ARE ABOUT TO UNDERTAKE TOGETHER.”

SAFETY AT SEA

Michelle Gorman is Master OIM on the *BlackLion*. That means she’s the ship’s captain. Sitting on the expansive window-walled bridge that looks more spaceship than seagoing vessel, she gazes out at the busy shipyard and longs to leave it behind for the high seas. In the last few weeks before sailing she busies herself with the very non-captain task of prodding the shipbuilders to finish the job, so she can do hers.

“The biggest challenge we face before we can get out there drilling is dealing with the shipyard.” Gorman says. “We are in a different position than usual, where we are the client who has to wait. Right now we are trying to finalize the last few open items and come to an agreement what work is going to be completed here. We all are very ready to take control of this ship and start doing things the Diamond way.” Gorman says this impatience is more about eagerness than anything else. “Everyone is getting really excited to go to work and be successful. When you have that with a crew, everything is easier because everyone is taking ownership and wanting to team up to make this a successful venture. I really like the crews who have come aboard so far. There is really good morale on the ship. There’s a lot of enthusiasm here.”

In late May Gorman got her wish. The *BlackLion* was officially delivered and her crew finally took the control they had craved for so long. With HHI at last astern, the great challenge ahead for the crew was safety. Operating safely is paramount at Diamond Offshore, and the level of vigilance has to be even higher when fielding a brand-new crew on a brand-new rig. “I have to make sure the crews understand this is our number one priority,” says Gorman. “There is always a learning curve any time you take a new rig, and people need to remember to take a step back and know what they are doing prior to going ahead.”

Lionel Gautreaux is Safety Department Representative on the *BlackLion*, and he has a plan. Before sailing he had to prepare 1,500 JSAs—job safety analysis documents that guide every task on the rig in detail. The JSAs were sent from a sister rig, and each one has to be modified to the *BlackLion*. Gautreaux says this is an unusually high number of JSAs to develop, by far. “In the first month we got 200 of the 1,500 done. But the bigger challenge will be the human factor behind these documents. We don’t

want to just teach them the steps to follow. We have to make sure they really understand *why* we are doing each procedure. We don't want to just force-feed all of these policies at one time. We want you to really absorb the safety culture and go home every day with ten fingers and ten toes and the breath you came to work with."

Gautreaux says HR's crewing strategy has made a huge difference in reinforcing the safety culture. "A lot of our people have been with the company a long time, but we also have a lot of new hires. Many of them have never even been offshore. We have to make sure there is a bridge between the senior people and new hires to transfer their knowledge. The HR department did a great job of finding people with a great attitude for learning our systems. They ask a lot of questions and want to do things the Diamond Offshore way. Everyone has a go-get-'em attitude about learning safety. The camaraderie has been unbelievable."

Michelle Gorman adds that this tight circle of safety solidary includes the client as well. "Hess has been onboard with us from the beginning. The company has a great reputation for safety, and I really see that with their reps onboard. They have been very active in our safety meetings, very vocal. They're watching, and so am I. We're all here to ensure good safe operations. That's priority one."

HIGH STAKES FOR HESS

When the *BlackLion* begins drilling in the Gulf of Mexico in late 2015, the ship will be making history for Hess. According to Ron Nelson, Completions Engineer for Hess, these will be the most challenging and probably the most expensive wells the company has ever drilled. Vertical well depth will exceed 30,000 feet into sub-salt formations that have wide pressure variations, tight productions zones, and zero margin for error. "When the rig gets to the Gulf and goes to work, it has to be right," says Nelson. "All of our plans are based around the rig systems and flawless execution from the crew. If everything is not right, we won't be drilling these wells until it is. So taking the time here at the front end is critical. We have clear expectations of what the performance will be before the rig goes on Hess payroll."

Nelson is part of the Hess team overseeing the *BlackLion's* final preparations in the shipyard, a team led by Completions Supervisor Jim Wenner. When Hess secured the contract for the drillship, Wenner says the company provided input on the staffing effort. "These wells are critical to Hess, so we gave some guidance on the experience levels we were expecting, and we reviewed CVs for some of the management level positions."

Wenner states that Hess already had high confidence in Diamond Offshore personnel based on recent experiences. In 2012–2013, the *Ocean Valiant* had been the flagship rig supporting the company's major drilling interests in Equatorial Guinea. "That rig performed very well for us, so we feel very good about continuing to work with Diamond Offshore," he says. "Hess has a great relationship with Diamond all the way up to the CEOs, and the attitude on this project has been great. When we see something of concern from a client perspective, we discuss it. We are always included in the decision process. This kind of teamwork is essential for what we are about to undertake together."

Like the rest of the crew, Wenner is ready to get to the Gulf of Mexico and get the drill bit turning. He's used to drilling and completing wells, so watching the shipyard knock out the last few punch-list items is about like watching paint dry. "The departure day is a bit of a moving target, but we try to be lenient and flexible. We've never drawn a hard line in the sand. We've been given a range of time, and everything has fallen within that range. That said, I'm really looking forward to pulling out and seeing the full crew functioning and working together. It will be great to take the shipyard out of the equation and get out there where it's just Diamond and Hess taking control and getting things exactly how we want them."

ANCHORS WEIGH

As of this writing, the *Ocean BlackLion* is fully crewed and en route to the Gulf of Mexico. After a three-day crew change and refueling stop in Mauritius, she rounded Africa's Cape of Good Hope on June 29th under unseasonably calm conditions. Up the West African coast to Las Palmas in the Canary Islands for a month and a half of client-contracted upgrades, crew change and refueling, then the ship is off to the GOM.

In those last few exciting days before departing South Korea, Safety Rep Lionel Gautreaux summed up the crewing process, now complete. "From what I can see, the people here feel proud to have a job on this particular rig. They feel it was maybe a special calling to be assigned here. They are very optimistic, very outgoing and eager to work," he says. "Everyone is ready. The shipyard has been great. Ulsan has been a beautiful city to us and treated us well. I hope we have treated her well, too. We've enjoyed it, but we are ready to leave and do a good job for Hess." ◘

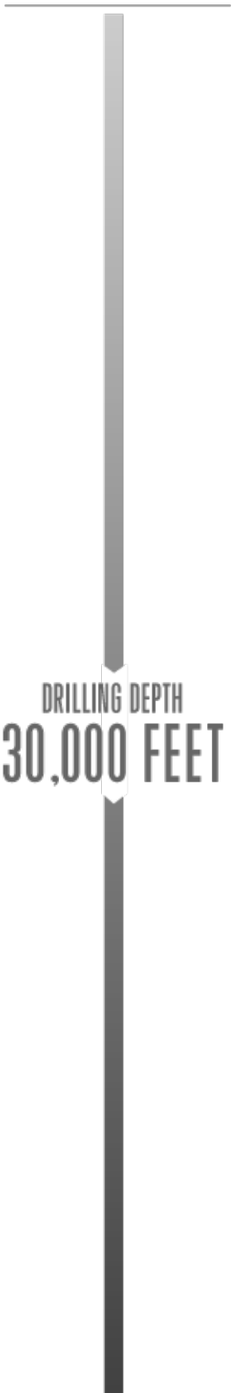

OCEAN
APEX

GOING DEEP

DIAMOND OFFSHORE EXPANDS ITS CAPACITY TO SERVE DEEPWATER MARKETS WITH TWO NEW SEMISUBMERSIBLES.

WRITTEN BY *SCOTT REDEPENNING*
PHOTOGRAPHY BY *DREW DONOVAN*

Since 2009, the company has been focused on adding new ultra-deepwater assets, with the acquisition of two newbuild 6th generation semis, the recent deliveries of four newbuild drillships and construction of a harsh-environment semi, scheduled for delivery in 2016. All of these new units have customer contracts extending into 2019 and 2020. To ensure Diamond Offshore also remains competitive in the competitive deepwater segment, the company also built the Apex and Onyx, which were delivered in 2014 and 2013, respectively. The company's deepwater fleet now stands at seven rigs.



A primary goal on every Diamond Offshore project is to gain optimal efficiencies in both the timeline and capital expenditure. To achieve this with the *Apex* and *Onyx*, two existing Victory Class mid-water rigs were retired and stripped down to the base steel to serve as a foundation for the new vessels. These strong hulls became the broad canvas on which two completely modern rigs were designed.

Both the *Apex* and *Onyx* are built to operate in water depths up to 6,000 feet and can drill wells as deep as 30,000 feet. Each rig can house 140 crewmembers and is outfitted with high-capacity drilling and safety equipment, including a 15,000 psi five-ram blowout preventer. These units are designed for today's offshore environment, where both client requirements and government regulations are tougher than they've ever been.

THE APEX OF DECK SPACE

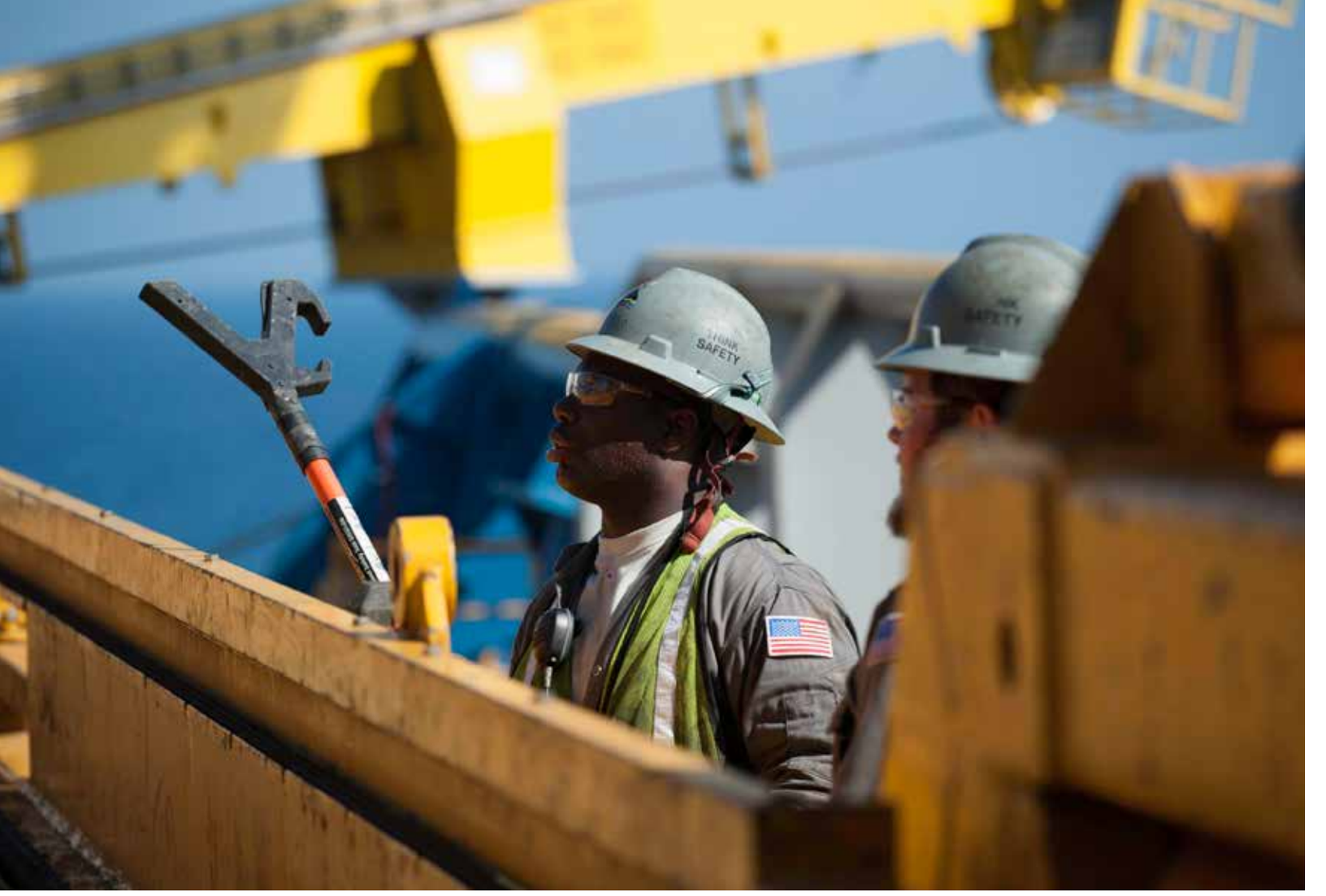
While both rigs are equipped very similarly, the *Ocean Apex* was designed with something extra that's a rarity on deepwater units—a 16-column configuration that allows enormous liquid storage capacities and nearly an acre of free deck space. Jon Shoemaker was Project Manager for the *Apex*, which was built at Jurong shipyard in Singapore. He says that the rig's first customer, ExxonMobil, was particularly attracted to this attribute.

"We had a customer come out and look at the rig when it was being built. They were very impressed with how much deck space was available even after all the installations they were planning," says Shoemaker. "I remember one of the representatives actually said, 'Wow, I can install my ROV spread, my cement unit, my other third party equipment, all my well test equipment, and I've still got enough deck space to do the Texas two-step on this dance floor.'"

Shoemaker adds that the extra capacity, including the columns that can store high quantities of liquid mud, base oil, brine and drill water, makes the *Apex* highly suitable for remote operations. The rig can drill for a long time out on its own before it needs to be resupplied.

The *Ocean Onyx*, which was built at AmFELS in Brownsville, Texas, came out of the shipyard with some operational advantages as well. David Wedgeworth, who was Project Manager, says a difficult client requirement actually turned into one of the rig's more attractive features. "Apache had the first contract, which called for drilling in the Gulf of Mexico. The *Onyx* had a traditional A-frame ROV setup, which launches the remote

“WOW, I CAN INSTALL MY ROV SPREAD, MY CEMENT UNIT, MY OTHER THIRD PARTY EQUIPMENT, ALL MY WELL TEST EQUIPMENT, AND I’VE STILL GOT ROOM TO DO THE TEXAS TWO-STEP ON THIS DANCE FLOOR.”


SAFETY

operated vehicle over the side. But the client required an upgrade to an ROV that can be launched in any weather conditions," Wedgeworth says. "That unit is bigger and launches straight down through its own moon pool, so we really had to make some major adjustments to the deck configuration to install it. That was a big challenge, but it makes the rig more marketable now."

Both rigs also have the advantage of being able to operate in both shallow and deep waters. According to Wedgeworth, some clients plan to drill in multiple water depths during a contract. But whether they plan this or not, the majority of rig tenders are sent out specifying a wide range of possible depths, which qualifies the *Apex* and *Onyx* for a wide range of possible bids.

STRATEGIC CREWING

During the same timeframe that the *Apex* and *Onyx* were being prepared for their first assignments, Diamond Offshore was also in the process of readying four brand-new highly complex drillships. That meant more than a thousand skilled crewmembers had to be found, assigned and trained to work these various rigs. Diamond Offshore addressed this very human challenge with a technological strategy. In short, the *Apex* and *Onyx* were purposely designed with a different level of technology than the drillships, so they could target a different kind of crewmember.

Jon Shoemaker explains. "Crewing the drillships alone was already a big challenge. People who can work such high-tech equipment are hard to come by in the industry. So there was a conscious decision in operations, HR and technical services about how we could crew the *Apex* and *Onyx* without competing for resources needed for the drillships. When designing the rigs, Diamond specified new equipment, but the style of equipment was more of a manual drill floor versus the automated style of the drillships. That allowed us to pull from an existing pool of trained Diamond Offshore employees who were currently working on other rigs. Plus the training for these new rigs would not be as arduous or time consuming, because the incoming crews were already familiar with the style of equipment."

Shoemaker says the decision was also supported by client requests. "There was feedback that customers wanted very capable deepwater rigs, but they wanted to get away from some of the automation, because their impression was that automation can cause more downtime. The internal thinking was that if we had some new rigs that were more conventional, they would be very attractive to certain customers."

The *Apex* and *Onyx* are an ideal fit at an ideal time, both in technology and personnel. "Our people are proud to be working these new rigs," says Shoemaker. "Many of them came from rigs that were exiting the fleet. These two vessels allowed us to hang on to a lot of our talented people. Now they're working on very capable, very marketable rigs. And they come into the job very familar with the technology, so they can work these rigs safely and efficiently." ◘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WRITTEN BY *SCOTT REDEPENNING*
PHOTOGRAPHY BY *CHRIS SHINN*

The two highest priorities for every Diamond Offshore drilling operation are safety and performance. Attaining these two goals takes leadership, experience, discipline and decisiveness. But what about those rare qualities? Where are they attained? At Diamond Offshore, the starting point is in the Ocean Technology Center, better known as OTECH—30,000 square feet of the most sophisticated training methods and machinery in the industry.

TRAINING UP

AS DIAMOND OFFSHORE INVESTS BIG IN BUILDING CUTTING-EDGE NEW RIGS, THE COMPANY FOLLOWS SUIT IN ITS TRAINING DEPARTMENT BY OPENING OTECH, THE MOST ADVANCED EMPLOYEE DEVELOPMENT CENTER IN THE OFFSHORE INDUSTRY.

PETAR RADULOVIC
Director of Learning & Development

OTECH, which sits adjacent to Diamond Offshore headquarters in Houston, opened its doors in 2013. Before this date, in fact decades before this date, Diamond Offshore was already well known for having world-class training programs. But in recent years a lot had changed. Four new ultramodern drillships were ordered and built, as well as two new deepwater semisubmersibles and an ultra-deepwater dynamically positioned semi, adding to an already upgraded and updated fleet at the deeper depths. That's a lot of gleaming new iron hitting the high seas in a short time. Plus, these happen to be among the most technologically advanced drilling units on the planet. To properly work these rigs and deliver safety and performance, more than a thousand crewmembers would require intense and comprehensive preparation. Diamond Offshore needed training programs that could live up to its new rig investments, and thus invested in building OTECH.

As Diamond Offshore's Director of Learning and Development, Petar Radulovic runs OTECH. He makes no attempt to conceal his pride for the impressive new facility, but says what *isn't* new is Diamond Offshore's modern approach to training. "OTECH was opened recently, but to really understand it you need to rewind about thirty years," he says. "The company's internal training program started in the early 1980s when they created courses for well control and stability. They were responding to new needs in the industry back then, and that is what we are doing now with OTECH."

Radulovic says rig workers traditionally got most of their training on the job. Yes, they attended training courses along the way, but realistically most of the knowledge was gained working shifts far offshore. "Well, over the last seven years we got into this predicament where our company was changing quickly and we had to adapt," he says. "Our fleet was transitioning from older traditional rigs to the latest 6th generation technology that requires a new operational skill set. These rigs are in demand now and we don't have time to wait for people

to learn on the job. So we invested in the training to keep the crews in step with the times. This allows us to keep executing at the levels Diamond Offshore is used to executing."

Radulovic adds that there was one more major factor contributing to the need for OTECH, something he calls the generational crew change. "People with the most experience are exiting the industry slowly but surely. As they retire, there's a huge experience gap to the people who will replace them. So we knew it was imperative to invest in a training facility like this to provide them with the experiences they would typically get on the job," he says. "Here, in a week or two of training they can experience what would take years and years of observation in the field. We can dial in the experience that somebody would gain over years in different parts of the world. At OTECH we can realistically simulate that."

FROM BODY BUILDING TO BRAIN BUILDING

When Diamond Offshore makes a major investment in anything, be it a rig or a shorebase facility, the company usually looks for a way to be strategically and economically opportunistic. OTECH cost $12 million to build out and equip, but the price tag could have been significantly higher. Instead of starting from scratch with a new building, the company looked to a nearby structure that had good bones and an eager seller. In its past life, most of the OTECH building had been a Bally Total Fitness center. In fact, many Diamond Offshore employees were members. While some admit they were sad to see the weights, treadmills and elliptical machines go, all agree that replacing them with industry-leading facilities, technology and instruction was well worth it.

When clients tour the vast facility, they're likely to see several of the center's 17 simulators in action. There are two full-scale drilling simulators, one crane simulator, one full-scale, full-motion ballast-control simulator, one desktop drilling simulator and 12 portable well control simulators, all of them state-of-

“UNLIKE TRADITIONAL COURSES, WITH THIS KIND OF TRAINING YOU DON’T GET TO MENTALLY CHECK OUT… YOU HAVE TO BE ENGAGED AT ALL TIMES BECAUSE YOU ARE OPERATING THE EQUIPMENT, AND YOU KNOW THAT SOMETHING TOUGH IS COMING.”

the-art. Two of the full-scale units are positioned to simulate dual-activity operations, a highly sought capability offered by the new drillships. Touring clients can also look in on an array of classrooms equipped with modern instructional technologies and retractable walls. The center’s interiors are sleek, contemporary and spotless. OTECH still has that new-building smell.

“We like to throw out our stats and show off the facilities,” says Radulovic. “But what is even more important are the people who benefit from OTECH. Last year we trained about 1,500 people here through 20 different courses taught by seven instructors. We train floor hands, derrick hands, assistant drillers, drillers, toolpushers, ballast control operators, dynamic positioning operators, crane operators, chief mates, electricians. Really, almost anyone’s job can be taught and simulated here, and a large amount of Diamond Offshore crewmembers have to come through one to three times a year.”

Instructors still teach the basics at OTECH, such as well control, ballast control and stability. But according to Radulovic, the center’s abundance of advanced technology has allowed Diamond Offshore to usher in a new generation of learning, referred to as experiential training. “It’s not an instructor standing in front of a class just talking. The new classes are almost completely comprised of simulation exercise followed by the discussion of the lessons learned during the simulation. We put our employees through an experience that really helps the learning take root,” he says. “During simulation they get a variety of issues and challenges thrown at them. They are responsible to detect those issues and react appropriately. They get to be successful, or not successful. If they are not successful, we correct the mistakes and do it again. If it’s successful, we talk about what made it so. It’s a new way of approaching that Drilling 101 type of knowledge.”

Radulovic says that when students are engrossed in a challenging experience, they have no choice but to learn. “Unlike traditional courses, with this kind of training you don’t get to mentally check out when you are dozing off after lunch. You have to be engaged at all times because you are operating the equipment,

and you know that something tough is coming. There is always a complication right around the corner. By the time they leave here each day, they are drained."

OFFSHORE, TAKEN INDOORS

Have a seat in one of OTECH's full-scale simulators. The controls closely replicate those on Diamond Offshore's new drillships. From the chair you are gazing out through windows exactly like those in the rig's driller cabin, and the view is amazing. Nine laser-guided projectors stitch together a 3D world onto a 20' x 40' dome-shaped screen that surrounds the trainee in virtual rig reality. Look up, you see the derrick soaring above. Straight ahead is your drill string, complete with the up-and-down movement of the rig compensating for wave motion. Look to the left, you see the manifolds. To the right you can see the helideck. The other senses are engaged as well. You hear the sounds of a rig hard at work. You feel the vibrations of massive moving machinery. Really, the only thing missing is that unmistakable offshore rig smell.

Simulations also can be run to train crane operators, which is an important breakthrough for Diamond Offshore. Crane training has been around for many years, but it is typically done onshore with a real crane in a very controlled environment. This puts serious limitations on the training because instructors can't expose the student to any failures. It's just too dangerous. But in a simulation they can practice all the failures they want.

"We get to be in an offshore environment with all the elements—the wave motion, the wind, the lighting, day, night, snow, rain, fog—and we can change these parameters in the middle of the exercise. We can make a storm blow in," says Radulovic. "We can cause failures of all kinds—failed slings, failed loads, failed mechanical components. All of the things that a traditional course would just talk about in terms of emergency response, we make our people experience it in a very real way and *then* we talk about it. Plus we can record the simulation from multiple views. We can see the operator's point of view, or what the lift looks like to the roustabout, or the supply boat's view. You can't do that in a regular brick and mortar school."

In simulated training, realism is key. Students must be immersed to the point that they can apply the training without hesitation when they go offshore. But how real can OTECH really be? Radulovic won't try to convince you that they get very close. Instead he relays an anecdote. "Before we deployed on the full-scale simulators, we wanted to test them out with some of our most seasoned supervisors. We had several proof-of-concept sessions with these people, and a situation arose where one rig superintendent and one driller got into a heated exchange about what was happening in a particular simulation. At that point they were no longer sitting in the middle of Houston operating a bunch of computers. They were far offshore in the Gulf of Mexico dealing with a real problem, and they wanted to solve it correctly. At that point we knew the course was ready. If we can get somebody with that much experience that invested in an exercise, we know we have a good learning tool for people with much less experience. Simulation has big advantages, but only if it's believable. If we don't realistically replicate the offshore environment, then we've lost the student, because at that point it would just be a video game."

To be certain, OTECH's simulations aren't created by computer geniuses working in a vacuum. They're imported from offshore locations around the world. "Our simulations come straight from the expertise of the fleet," says Radulovic. "Yes, students are in Houston, inside a building, but the experiences they are gaining come from real-world issues we've encountered offshore. Being that we are an internal training facility, we have the advantage of always having 30-plus rigs in the field that we can call and ask questions of, so we can always improve our courses. We have about 3,000 people out there on rigs with knowledge that we can tap to make our product here very believable."

THE HUMAN SIDE OF SIMULATION

Advanced technology is only the first step in realistic training. You also need advanced teachers. Senior Training Specialist Karl Shearer is one of the seven instructors at OTECH. He has taught numerous courses including well control to Diamond Offshore personnel for 18 years, and he's quite pleased with his new workplace.

"We are no longer down a hallway on the first floor. We now have our own house, and it's a big house. We have a lot more flexibility thanks to our space," Shearer says. "The plain fact that we put in the best of the best simulators really speaks to how highly Diamond Offshore values training. We are the only company to have all of this technology in one place, which is great, but really our success comes back to a very human thing—the quality of the instruction. We all are specially trained in the teaching of adults, who learn very differently. For them it's not about giving the answer, but patiently steering a student to find the answer for themselves."

Shearer explains further. "We don't just teach them what to do on the rig. We teach them why they do it. When there's real understanding, there's real learning. I need them to understand the concepts behind well control, because when they're working offshore and see something they haven't seen before, they will probably be able to make a very educated presumption about what to do."

Every training session starts the same way a shift starts on a rig, with a pre-tour (pronounced "tower") meeting. During the meeting trainees are responsible for obtaining the information needed to go to work, just like they

OTECH SIMULATION IN ACTION

would on the rig. They are told what has been going on prior to the shift, and what the plan is for their day. But the plan invariably changes, and they have to demonstrate that they can deal with it correctly. Instructors will dial-in the exercise to the student's knowledge level. If a student is struggling, instruction is kept basic until competency is achieved. If someone is already highly competent, it's a safe bet that the instructor will make the simulation tougher to reach for a higher level of learning.

OTECH student Douglas Rogers can attest to the depth of teaching here. He recently took the drilling practices course for his job as Assistant Driller on the *Ocean BlackHawk* and says he came away better prepared to handle issues in the real world. "The scenarios we run here could most definitely happen out there," he says, "but they like to throw curveballs our way. You learn to take a step back, calm down, and go through your procedures to figure it out. I'm not going to lie, it's challenging. This is not a vacation to Houston. It's pretty intense all day long."

Rogers has been at Diamond Offshore for only a year, and while he's never seen anything like OTECH's high tech, he was most impressed with the people here, and that Diamond Offshore trains its own personnel rather than relying on third-party facilities common in the industry. "I like OTECH because it brings that family connection to training. When you come here, you are only with Diamond people and Diamond trainers. The same way that you become family with the guys on your rig, that family aspect also comes to the training room. I really like that. Having high technology is fine, but what I'm most interested in is working side by side with other Diamond Offshore personnel from other rigs and learning from each other."

GIVE THAT TRAINER AN OSCAR

In his day-to-day life, Karl Shearer is an affable guy. But when he puts on his training hat, something changes. He becomes unpredictable and even downright devious, and the same goes for his fellow instructors. It is their job to feed students a steady diet of surprises and problems. As they see it, better here than out at sea with hundreds of lives at stake.

"We will get the guys familiar with the equipment where they think they know what's going on, and then we throw a wrench in the works to see how they will react to it," says Shearer. "The technology allows us to put them in situations that hopefully they will never experience on a rig, but if they do they can say, 'oh, I've seen this before. I know what's going on here. I can handle this because I've done it.' You can't train like this on the rig, because you can't put people in dangerous situations there. But here we can create all kinds of danger. And if they make the wrong decision, the only consequences are better learning."

To make these lessons as real as possible, OTECH trainers also cultivate another skill. Acting. When working a simulation, the trainee must communicate with various rig personnel by phone, just as they would offshore. The instructor takes all the calls and plays all the roles. Using some of his best tried-and-true accents, Shearer explains, "So, say the crane operator needs to call the boat captain. Well, today that captain is a Canadian with a thick accent. Then he calls the company man, who happens to be from Australia. Then I have to be the driller, then a mud hand, then a roustabout, and everyone needs to sound different. I've noticed that the instructors have all developed their favorite voices for the roles."

The instructor also has to know what level of knowledge is appropriate for each role. If Shearer is playing a superintendent, he will speak with authority and have higher-level information. A few minutes later he may be playing a roustabout with very little experience. In this case, if he tells the trainee that everything looks fine, the trainee better take that inexperience into account before believing that everything really is fine. "The key is to not give too much away," says Shearer. "We feed a little information and then wait to

see what they ask. If they ask the right question, we give the answer. If it's not the right question, we may give them something general or completely useless. This gets them thinking in the right direction, to dig deeper to solve the problem."

Shearer says that sudden moment, when a lesson clicks into place in the mind of a student, is what he loves most about his job. "You know the cartoon where the guy gets the light bulb above his head. I get to see that light bulb come on in my students. As an instructor, that's the best feeling in the world." Shearer adds that it's also gratifying to see people come back through as they advance in the company. "I taught a whole generation of roustabouts, and now they're coming back to me as drillers and toolpushers, and they're the future of the company. They're going to be the OIMs and vice presidents. Who knows, I might have a future CEO on my hands right now."

CLIENTS IN THE HOUSE

While training at OTECH is mandatory for Diamond Offshore employees, clients are invited and encouraged to take part as well. A number of them have taken the company up on its offer. Hess, which holds the contracts for the *Ocean BlackLion* and *Ocean BlackRhino*, is sending two dozen of its own people to train at OTECH this year to prepare for operations aboard the two drillships.

This is a revolution, compared to how drilling campaigns are usually started. Conventionally, every contract between an operator and drilling contractor begins with a meeting that brings all participants together, including third-party service providers. The operator presents the well plan in detail so that everyone involved can become familiar with the objectives and potential hazards of the drilling campaign before the well is spudded. This pre-spud meeting is also known as "drilling the well on paper," or DWOP. OTECH is making it possible for clients to engage in a much richer pre-spud meeting, in which DWOP is replaced by DWOS, or "drilling the well on simulator."

Clients like Hess are taking advantage of the DWOS opportunities provided by OTECH, because the technology gives them much better insight and predictability for the upcoming wells, says Petar Radulovic. "We get to replicate the operational challenges that the client is expecting, which helps us to think about the undertaking not just on paper, but in real life and real time. It helps us test out the well plan before we are out there spending money in the real world."

"OTECH is a premier facility that offers some of the most advanced training in our industry, but that's only half the story," Radulovic continues. "The other, and equally important, function is to build a strong relationship between our drilling crews and the operator personnel in charge of the project. Beyond training, this is also fantastic teambuilding. OTECH helps us achieve alignment with our clients in a controlled environment before we go offshore to work together."

To that end, a special DWOS session has been designed that specifically replicates expected operations on the newly built *Ocean BlackLion*, which will be drilling its first well ever later this year in the Gulf of Mexico. This full-simulation model will consist of four exercises that will put Hess and Diamond Offshore rig personnel through challenges in well control, loss of circulation, stuck pipe and completions for the first well to be drilled. "Being able to preview potential problems is an enormous advantage," says Radulovic. "The saying goes that perfect practice makes perfect. At OTECH we provide our crews and the operator personnel an environment where they can practice perfection."

Radulovic adds that participation at OTECH allows clients to assess the quality of Diamond Offshore training firsthand, rather than just looking at a report. "They can see if we just talk the talk, or if we also walk the walk. And the only cost to them is that after the class we want to talk to them to see how we did."

Clients also need assurance that training programs meet the requirements of industry governing bodies, such as the Coast Guard, Nautical Institute and International Association of Drilling Contractors (IADC). According to Radulovic, OTECH delivers and then some. "Those accreditations take our training to a certified level, but then we

take it farther, enhancing our courses to bring them up to Diamond's own policies and standards. The first goal is to meet industry requirements, but we don't want to just provide a certificate," he says. "Ultimately, we want to make sure our people have the knowledge they need to provide outstanding service to our customers. When you pass one of our classes, you know much more than the fundamentals. You know specifically how Diamond Offshore does things."

A RISING TIDE LIFTS ALL RIGS

If OTECH is already the future of training, where does it go from here? Radulovic says his team is working on a training approach that reaches a higher level in the company—to Diamond Offshore's top leaders. The leadership development program is bringing in people throughout the company who are responsible for managing others. Radulovic says this is a new frontier for offshore training.

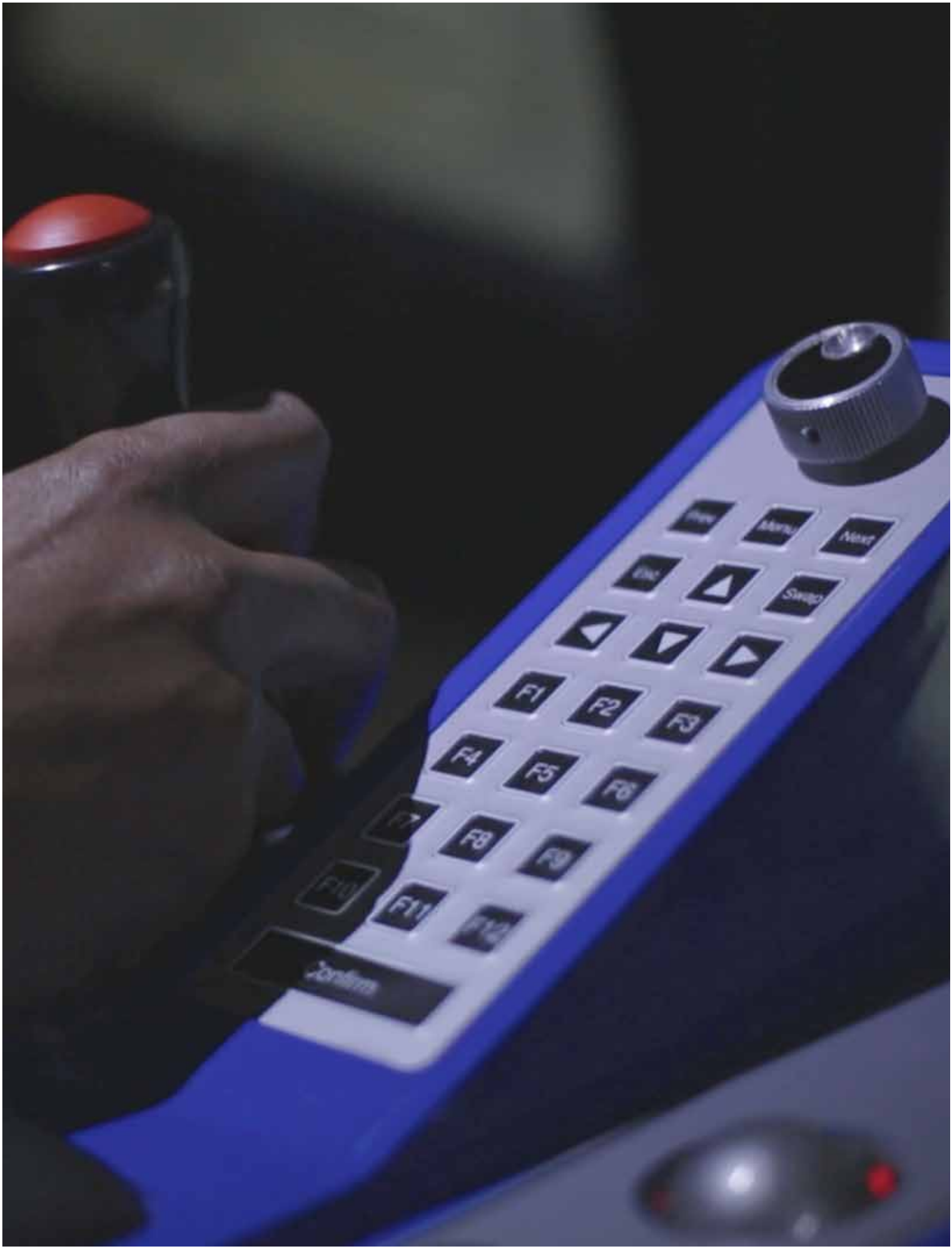
"We are setting the tone for how to lead people. Up to this point everything has been focused on hard skills. We are now also focusing more intently on soft skills like leadership, business acumen, financial acumen and more. It's important at all levels to understand the grand scheme of our business. This allows us to get out of our silos. The company only works if everything works."

Lastly, OTECH is also developing a new line of training inspired by industries that have zero margins for failure, such as airlines, medical and nuclear. For years these industries have conducted courses that focus on human resource management and the science of decision-making. "This type of training has never been part of our industry," says Radulovic. "But we want to learn from these industries and apply what they've learned so we can avoid human errors. We have to work at this as hard as they do, if not harder. This is the direction we are going."

It all comes back to the two highest priorities—safety and performance. OTECH certainly gives Diamond Offshore an industry advantage in achieving these goals, but Radulovic says exclusivity isn't the objective. He would like to see more facilities like this around the world because it's good for everyone. "The more people in the industry who are well trained, the better. We're all winners if we all go home safely," he says. "We may be a step or two ahead of others in the industry, but this is part of a larger process. We are not in this alone. We want everyone to be successful. A failure of one company is a failure for the entire industry."

Radulovic says that no matter what, the culture of intense training built over the last 30 years will always set the company apart. "Our people come here expecting a tough course every time. It's never leisurely. You train all day, and then there are a few more hours of serious homework before you get to come in the next day and do it all again. We make sure that when they leave, they are better. It's not good enough for us to just verify their knowledge. We have to improve on it."

"It's especially important during more challenging times for the industry to not let anything slip," Radulovic concludes. "We have to continue to stay polished and execute at the highest level. We want to give operators and society in general a high level of confidence in what we are doing. OTECH plays a big role in that. We make sure Diamond Offshore people are always performing at their best."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WRITTEN BY *SCOTT REDEPINNING*
PHOTOGRAPHY BY *CHRIS SHINN*

In 2003, the Ocean Rover emerged from Keppel FELS shipyard in Singapore as one of Diamond Offshore's newest Victory Class upgrades. The ultra-deepwater semi was immediately hired by Murphy Oil in partnership with Petronas to help develop Kikeh, a promising new field offshore of Malaysia. Twelve years and nearly 100 wells later the Rover is still working for Murphy in Malaysia, an amazing fact given today's capricious contract environment. Yet even more amazing is this—over those years the Rover has achieved the longest-running and most impressive safety record in the history of both Murphy and Diamond Offshore. In fact, it's a record that would be coveted by any operator or drilling contractor anywhere in the world. So, how did the rig get from 2003 to now so safely? The proud members of Team Rover would very much like to tell you.

SAFETY FIRST

A STORY OF AGREEMENTS, ATTITUDE AND ASTOUNDING RECORDS.

OCEAN ROVER BY THE NUMBERS

4,378 DAYS WORKING WITH MURPHY OIL.

6.3 MILLION TOTAL MAN-HOURS LOGGED.

OCEAN ROVER LOST TIME INCIDENT RATING (LTIR)

OCEAN ROVER
LOST TIME INCIDENT RATING (LTIR)
SINCE 2003

INDUSTRY AVERAGE
LOST TIME INCIDENT RATING (LTIR)
SINCE 2003

"The *Rover* is a good rig, but if you compare her to similar units in the fleet, the capabilities are about the same," says Ben Choo, Murphy's General Manager for the region. "What makes the *Rover* special is the people—more specifically, having the same really good people for a very long time. That's what it boils down to. This is the longest rig contract I've ever been a part of, and over that entire time we have had a steady group of people in all the key operational positions. This consistency has helped us build a very good culture for both safety and continuous improvement. I absolutely think that having this core team in place for so long is why we've been so successful."

This decade-plus continuity of key crew is certainly unusual for Diamond Offshore, where new assignments on new rigs occur regularly to balance experience across the fleet. In this case, it wasn't happenstance. It was by design. Murphy's design. "We made an agreement with Diamond to leave these key positions untouched," says Choo. "Back then we knew we were looking at a long-term project, and we asked them to make the commitment with us. It has paid off. If you look at our trend, every year we have improved on operational performance as well as safety."

When something great is achieved on one rig, the company naturally wants to migrate that success to other operations. On occasion, a few new people have been moved in and out to spread the culture of the *Rover* and to bring in good practices developed on other rigs. Choo agrees that cross-pollination of knowledge is important, but consistency still rules. "Bringing in new perspective can be good, but we also really value the continuity that this arrangement has allowed," he says. "I understand the desire Diamond would have to move experienced people from a strong performing rig like the *Rover* to transfer that knowledge. So I really appreciate their willingness to balance that with the continuity we want."

SAFETY IN NUMBERS

As of this writing, the *Ocean Rover* has worked for Murphy for 4,378 days straight, including a few short-term farm outs to other operators. Over that time the rig has clocked nearly 6.3 million man-hours. These hours have been spent drilling and completing about 100 wells, which add up to more than 750,000 feet (140 miles or 225 km) of open-hole footage. Through it all, the *Rover* has consistently ranked in the top quartile for HSE and operational performance.

One of the primary measures for safety is the lost time incident rating (LTIR). Since 2003 the *Rover* has had only five LTIs, which, when plugged into an established formula, results in a 0.16 rating. The industry average across the Asia Pacific region is significantly higher at 0.26, according to figures set down by the International Association of Drilling Contractors (IADC).

A low rating is a very high achievement in safety. Something special is happening aboard the *Rover*, and Murphy's CEO Roger Jenkins wishes he could bottle it. "This record is pretty unique. I wish there was some magic bullet I could identify as the cause," he says. "If I could duplicate this, I would implement it on

all of our rigs and share it with the industry. I believe the credit goes to good relationships and having straightforward hardworking people being committed to safety and performance every day."

Jenkins has worked with Diamond Offshore rigs his entire 32-year career, starting at Texaco and coming to Murphy in 2001 as deepwater drilling manager for Malaysia. He was there when the *Rover* arrived, and he stresses how critical the rig's role has been ever since. "Kikeh is the most prolific and profitable field in Murphy's history," he says. "We account for 25 percent of Malaysia's oil and gas production every day. It is very important to our company, and it has become very important for Diamond Offshore as well. I've worked with them for such a long time because they have no-nonsense management that wants the same things we do. They've been open to our requests and partnered with us, and I believe it has resulted in probably one of the most successful rig operations in the world."

COMMAND PERFORMANCE

Safety isn't the only category where records are being set. The *Rover* has also distinguished itself in efficiency and performance. During its long tenure with Murphy, the rig has achieved an NPT rate of less than one percent. NPT stands for non-productive time, which means when drilling operations are underway, the *Rover* rarely wastes a second.

Having high marks in both safety and performance isn't easy. The motivations for each can sometimes be at odds, according to Kevin Durr, Murphy's Senior Drilling Foreman aboard the *Rover*. "We make safety our highest priority, but let's face it, at the end of the day you're also trying to get deeper cheaper," Durr says. "The reason our safety record is what it is comes down to the commitment between Murphy and Diamond Offshore. Even through the farm outs, there has always been a strong agreement between the two companies that safety and operational performance would go hand in hand."

Easy to say. So to really put teeth into that statement, everyone associated with the *Rover* decided from the beginning that they needed to look for ways to get better every day. Anything was fair game. If a crewmember came up with an idea that could save five minutes and do it safely, the idea would be adopted. This open-mindedness has paid off, literally. So far more than 2,000 ideas, also called lessons learned, have resulted in new procedures that have saved the operation more than $100 million.

"When you have an open-door policy, you can really achieve some great things," says Durr. "We are open to every crewmember for ideas, at every level. If anyone brings up a point, they will be listened to. We have had the core crew together for a long time, and by now everyone knows that we mean what we say and that we will listen no matter what. No issue is insignificant. I think this has been the key to our improvement over the years."

To make sure every idea is collected and considered, the *Rover* has a continuous improvement coordinator onboard. Like the *Rover* itself, this person rarely has an idle moment. "He gathers information in formal meetings," says Ben Choo. "But often he picks up ideas in off-duty areas where people feel free to express themselves. We get ideas where you can save two hours here, five hours there, which doesn't sound like much. But when you combine it into a whole year's program, that's a lot of savings."

One of the greatest improvements has been to turn the *Rover* into something that by strict definition it is not—a dual activity rig. Dual activity capability basically allows you to do two steps in a work process simultaneously, so there is minimal or no downtime going from one step to the next. Most dual activity rigs have double derricks. Lacking that, the *Rover* has effectively pulled off the same capability with out-of-the-box procedural thinking. For example, the rig simultaneously recovers BOPs and secondary anchors, saving six hours on the procedure. The *Rover* also is outfitted with Tripsaver™ technology, which allows certain activities to occur without making time-consuming trips to the wellhead, so drilling is not interrupted. Good ideas like these have been plentiful, and they have saved millions of dollars.

"But we never forget that our performance and safety records have to support one another," Choo adds. "For every improvement idea, we make sure safety is not compromised, and for every safety policy, we look at how to execute it with utmost operational efficiency."

IT TAKES A TEAM

Kevin Durr's counterpart from Diamond Offshore is Tex Spears, OIM aboard the *Ocean Rover*. When managing the rig's daily activities, the two of them do not operate under the usual customer-vendor dynamic. Early in the relationship they conceived of a workplace not defined by rig employees and company men, core personnel and third-party suppliers, expats and nationals. They put everyone together under a single banner—*Team Rover*.

The idea was born in 2005 when Kevin Durr arrived, and since then it has become much more than a catchy name. "Look at our records. Right there I think you can see the difference it can make when you put together a true team committed to both operations and safety," says Durr. "I work for Murphy, but when we farmed the *Rover* out I've also worn a hat for Shell, Nippon, and Hess, and to me the mission never changes. We are always *Team Rover*. We all know what we have to get done each day, and we pull together to make it happen."

Durr says *Team Rover* is an attitude more than anything else. "I've been to several meetings at Murphy where they're discussing what kind of rig we need. I always tell them that the people on the iron are much more important than the iron itself. Anyone who comes aboard the *Rover* will feel something different immediately. If you're new to the rig,

“WE ARE OPEN TO EVERY CREWMEMBER FOR IDEAS, AT EVERY LEVEL. IF ANYONE BRINGS UP A POINT, THEY WILL BE LISTENED TO... NO ISSUE IS INSIGNIFICANT. I THINK THIS HAS BEEN THE KEY TO OUR IMPROVEMENT OVER THE YEARS”

you automatically become a team member, until proven differently. If you're not a team player, well, you probably won't get the opportunity to come back to the *Rover*."

Tex Spears adds that the *Team Rover* concept works, not because it's a rigid set of established rules, but because it has been given the breathing room to grow and evolve over the years. "We haven't been doing the same thing for the last 12 years. We try to keep things fresh," he says. "We are always looking to our crews to find better ways to do things, and we really want people to think outside the box. When new people come aboard the rig, we know they are a good source for new ideas for both safety and operations. It might be something that just saves ten minutes on a task, but that ten-minute idea can add up to be huge. From time to time we even have competitions aboard the rig to stimulate new thinking."

Not all of that thinking takes place out at sea. Andrew Teow is Diamond Offshore's Drilling Superintendent for *Ocean Rover*. He interacts with the rig from the company's offices in Kuala Lumpur, the humming corporate nerve center for Malaysia's oil and gas industry. The rig is 1,500 kilometers away in the South China Sea, but Teow says he is just as much a member of the team as the crews onboard. "That spirit comes to the shore as well. Even though I'm here in the office I still feel that I am on *Team Rover*, definitely."

Even though the distance is great, Teow is intimately tuned into everything that's happening on the rig. "Here on the shore base we pay attention to the most minute safety details," he says. "Nothing is too small, and we make sure to act on everything. We are fortunate that we have managers on the rig who feel the same way."

Safety definitely lives in the details, and it's not just the managers keeping watch and holding the standard high. Before every shift change, all crewmembers preparing to go on duty assemble for what's known as the pre-tour meeting. They use this time to discuss the rig's current activities and any related safety issues and precautions. At every pre-tour on the *Rover*, a crewmember is chosen to stand up and recite three key safety points on the spot.

"Anyone can be chosen randomly at any time," says Teow. "It's always someone new and it doesn't matter what position they hold. It can be one of our Malaysian nationals, an expat, a company man, a third party person, anyone. The crewmember can speak the points in any language, but they have to speak." Teow says that *Rover* crewmembers don't stress over being called on, because safety is so ingrained into the culture. "People don't have to rehearse something to say, because they live it every day. When you live it, you should have no problem reciting three safety points at any time."

ALL ABOUT ATTITUDE

During the *Ocean Rover's* 12-year stint, Murphy has developed the Kikeh field from hopeful startup into a production juggernaut. Ben Choo says that without Kikeh, Murphy wouldn't be the company it is today, and he credits *Team Rover* with much of the success. "This group is a world apart from all others in terms of can-do attitude," he says. "If we have a challenge, Diamond Offshore helps us figure it out. We put our heads together, consult the right people, assess the risks, and find a solution."

Choo says he's run into some contractors who are more prone to just falling back on saying no, which is usually the easiest stance to take. "Diamond's proactive attitude is a clear distinction. And what makes it even more impressive is how this attitude is combined with safety culture. It's easy to get too gung ho about getting things done and forget about the safety side."

For operations on the *Rover*, Murphy and Diamond Offshore use a formal bridging document to ensure that the safety policies of both companies are represented and aligned without ambiguity. According to Choo, creating this document was a fairly simple matter. "It's not hard to build any bridge with Diamond Offshore. Our companies are very closely aligned, both formally in our policies and systems, and in the attitude of our people. I feel we have more of a business partner in them rather than just a contractor. This has allowed us to achieve a lot." ◘

RIGS & LOCATIONS

DIAMOND OFFSHORE RIGS BY TYPE AND LOCATION

	AUSTRALIA	TYPE	DEPTH(ft)	EQUIPMENT
	OCEAN MONARCH	SS	10,000	VC; 15K; 4M; 5R
	BLACK SEA			
	OCEAN ENDEAVOR	SS	10,000	VC; 15K; 4M; 5R
	BRAZIL			
	OCEAN COURAGE	SS	10,000	DP; 15K; 4M; 6R
	OCEAN VALOR	SS	10,000	DP; 15K; 4M; 6R
◇	OCEAN ALLIANCE	SS	5,250	DP; 15K; 3M; 4R
	CANARY ISLANDS			
⊙	OCEAN CONFIDENCE	SS	10,000	DP; 15K; 4M; 6R
	GOM (U.S. AND MEXICO)			
	OCEAN BLACKHAWK	DS	12,000	DP; 15K; 5M; 7R
	OCEAN BLACKHORNET	DS	12,000	DP; 15K; 5M; 7R
	OCEAN BLACKLION	DS	12,000	DP; 15K; 5M; 7R
	OCEAN BLACKRHINO	DS	12,000	DP; 15K; 5M; 7R
◇	OCEAN BARONESS	SS	8,000	VC; 15K; 4M; 4R
◇	OCEAN STAR	SS	5,500	VC; 15K; 3M; 4R
	OCEAN AMBASSADOR	SS	1,100	3M; 4R
	OCEAN SCEPTER	JU	350	IC; 15K; 3M
◇	OCEAN TITAN	JU	350	IC; 3M
◇	OCEAN KING	JU	300	IC; 3M
◇	OCEAN NUGGET	JU	300	IC
◇	OCEAN SUMMIT	JU	300	IC
	MALAYSIA			
	OCEAN ROVER	SS	8,000	VC; 15K; 4M; 5R
⊙	OCEAN APEX	SS	6,000	VC; 15K; 4M; 5R
⊙	OCEAN AMERICA	SS	5,500	SP; 15K; 3M; 5R
⊙	OCEAN QUEST	SS	4,000	VC; 15K; 3M; 4R
◇	OCEAN GENERAL	SS	3,000	3M; 4R
◇	OCEAN SPUR	JU	300	IC
	SOUTH KOREA			
◈	OCEAN GREATWHITE	SS	10,000	DP; 15K; 4M; 6R
	TRINIDAD			
	OCEAN ONYX	SS	6,000	VC; 15K; 4M; 5R
	OCEAN VICTORY	SS	5,500	VC; 15K; 3M; 5R
	UNITED KINGDOM			
	OCEAN VALIANT	SS	5,500	SP; 15K; 3M; 4R
	OCEAN PATRIOT	SS	3,000	15K; 3M; 5R
	OCEAN GUARDIAN	SS	1,500	15K; 3M; 5R
◇	OCEAN PRINCESS	SS	1,500	15K; 3M; 4R
◇	OCEAN VANGUARD	SS	1,500	15K; 3M; 4R
◇	OCEAN NOMAD	SS	1,200	3M; 4R

MAP LOCATIONS

1. *GULF OF MEXICO (U.S. AND MEXICO)*
   3 SEMISUBMERSIBLES
   4 DRILLSHIPS
   5 JACK-UPS
2. *SOUTH AMERICA*
   5 SEMISUBMERSIBLES
3. *NORTH SEA*
   6 SEMISUBMERSIBLES
4. *MEDITERRANEAN / WEST AFRICA / BLACK SEA*
   2 SEMISUBMERSIBLES
5. *AUSTRALASIA*
   7 SEMISUBMERSIBLES (1 UNDER CONSTRUCTION)
   1 JACK-UP

KEY

SS SEMISUBMERSIBLE
DS DRILLSHIP
JU JACK-UP
DP DYNAMICALLY POSITIONED / (SP)
IC INDEPENDENT-LEG CANTILEVERED RIG
VC VICTORY CLASS
SP SELF-PROPELLED
3M THREE MUD PUMPS
4M FOUR MUD PUMPS
5M FIVE MUD PUMPS
15K 15,000-PSI WELL CONTROL SYSTEM
4R FOUR RAM BOP
5R FIVE RAM BOP
6R SIX RAM BOP
7R SEVEN RAM BOP
◈ UNDER CONSTRUCTION
◇ COLD STACKED
⊙ ACTIVELY MARKETING

Diamond Offshore Drilling is committed to operating at the highest possible level of operational integrity and quality, while emphasizing exemplary performance in the areas of health, safety, environmental protection and regulatory compliance. Diamond Offshore's mission is to exceed customer expectations and continually set the standard of excellence as we assist our customers in their worldwide efforts to discover and produce offshore petroleum resources.