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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 con-

tract 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.

“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* more 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?] point to 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.”

OCEAN ROVER BY THE NUMBERS



**4,378 DAYS WORKING
WITH MURPHY OIL.**

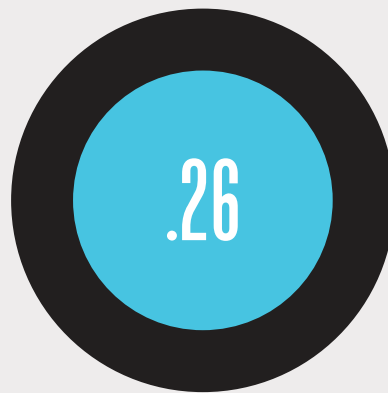


**6.3 MILLION TOTAL
MAN-HOURS LOGGED.**

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**

“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”

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, 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 the region. He interacts with the rig from the company's offices in Kuala Lumpur, the humming corporate nerve center for Malaysia's oil & 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, and my job is to support every rig in the region, 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."

