Assistant Project Manager for Flex3 and **Bernie Cook**, Special Project Engineer.

Mr Orr paid special thanks to **Karen**, his wife of more than 24 years whom he met while she worked at H&P. "I would not be here today, were it not for her. She's truly an angel from God."

"I want to say thanks to the IADC and **ReedHycalog** for this prestigious award and the scholarship."

Mr Orr noted that safety is still the number one challenge going forward for the drilling industry.

"We hear repeatedly over the years that it is difficult to attract people to this industry. I suggest that the industry needs to provide a better and safer working environment to attract new personnel. I challenge the industry to think differently about that problem.

"Innovation and technology are going to make this a better business going forward. The dramatic gains we have seen in the last 30 years will pale compared to what see going forward," Mr Orr said.

"One of the significant advancements over the last decades has been the professionalization of the business. We have progressed well beyond the "good ol' boy adventure."

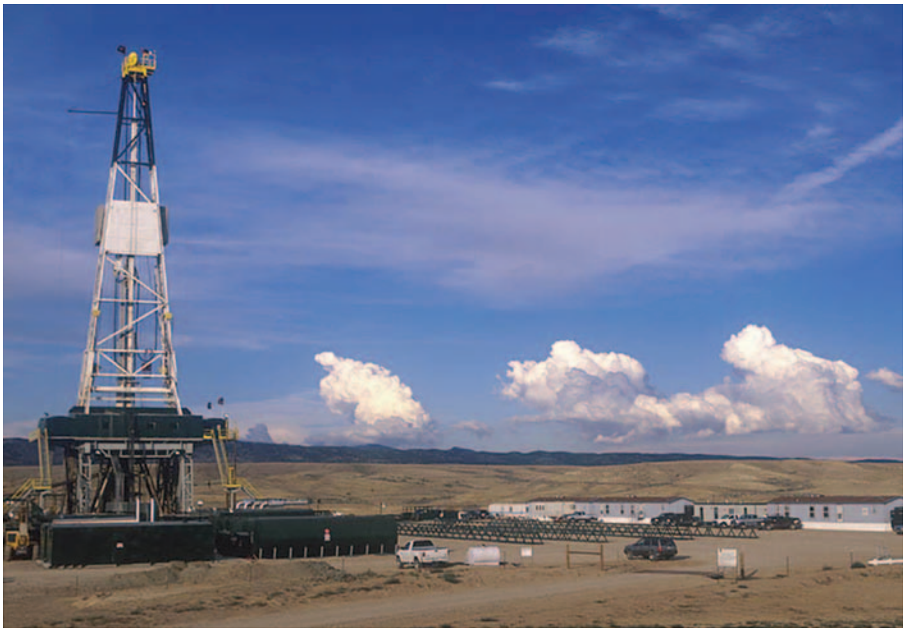
Mr Orr also expressed his appreciation to "all the people at H&P that make the rigs perform and the company great—the late **Carl Young**, **Ray Marsh**, **Felix Holmes**, **Jerry Day**, the late **Cotton Burnett**, the late **Henry Lemp**, **Winfred Coon**, **Leroy Tinsley**, **George Boyadjieff** (without whose support I would not have pursued my vision for the PLC controlled electronic driller), **Mark Trevithick**, the late **Donnie Tresner**, **Rome Gonzalez**, **Greg Hottle** and my brother **David Orr**."

The annual Contractor of the Year award, sponsored by ReedHycalog, was established in 1988 to recognize an individual drilling contractor representative's outstanding lifetime achievements in technical innovation, safety and economic efficiency in the drilling industry.

It is the only industry award that exclusively honors drilling contractors. ReedHycalog contributes a $2,500 scholarship in the recipient's name to the institution of his choice.

Mr Orr has designated the University of Tulsa to receive the ReedHycalog scholarship.

US onshore drilling activity level, dayrates nearing their 2001 peak



Grey Wolf's Rig 558 is drilling for Burlington Resources in Wyoming on the Deep Madden Prospect.

DOMESTIC ONSHORE DRILLING contractors are in high cotton these days as demand in virtually every basin is at peak activity and dayrates are approaching levels not seen since 2001. Business is so good that some contractors have programs calling for rigs to be reactivated every quarter according to a schedule. Dayrates have apparently increased enough that some operators are asking for term contracts rather than keeping a rig on the traditional well-to-well basis. Virtually every drilling contractor is optimistic that the market and dayrates will continue to strengthen as long as commodity prices remain high, but there is always the thought that it could turn around as quickly as it did a few years ago.

On the other hand, not all is as rosy as a significantly improved drilling market could be. The industry faces the constant challenge of finding and training qualified personnel in the face of increased rig demand. Cost of equipment and expendables has increased dramatically during the past year, and equipment deliveries, according to many contractors, have stretched to as long as 6-9 months for certain equipment and tubulars. This forces the contractors to be better planners, knowing exactly when equipment and supplies will be needed. For some contractors, while they are experiencing significantly higher dayrates than a year ago, profitability has only recently occurred as the industry's costs have increased as it geared back up to meet higher demand.

ACTIVITY HIGH IN ALL AREAS

US onshore drilling activity is high in virtually every region these days, with some areas experiencing much more activity than others. Perhaps the area posting the largest activity increase is the Rocky Mountains, helped along with the construction of much needed additional natural gas pipeline capacity.

Nabors Industries is active in nearly every area with the exception of the northeastern US. The company has seen its largest activity increase in the Rocky Mountains.

"The Rockies is the most active," said **Denny Smith**, Director of Corporate Development for Nabors Industries. "It has ramped up sharply now that there is incremental pipeline capacity that can handle more gas than is produced.

"The price of transporting gas has settled to a more normal cost," he continued. "That is what set off the boom in the Rockies, plus the overall rise in gas prices."

Mr Smith noted that prior to additional pipeline capacity, the difference in Henry

Hub and the Rocky Mountain wellhead price was well over $2.00/mcf. That spread is much narrower now, essentially the transportation differential, which is about 25-40 cents/Mcf, Mr Smith explained.

Nabors actively markets approximately 270 rigs in the US, with about 226 of them working in early April. The company has another 100 rigs that are basically components, parts and pieces of rigs that can be used to produce rigs at less than new cost, according to Mr Smith.

Ronnie McBride, Vice President of Marketing for **Patterson-UTI**, noted that while his company's activity is strong in all areas in which it operates, the three hottest areas are East Texas, the Barnett Shale area near Fort Worth and the Rocky Mountains. During March, the company had an average of 252 rigs operating in the US and 12 in western Canada out of its total fleet of 396 rigs.

Patterson-UTI also has active operations in Texas, New Mexico, Oklahoma, Louisiana, Mississippi, Colorado, Utah and Wyoming.

Grey Wolf Drilling is active in many different areas, including the Rockies, with nearly all of its 103 marketed rigs working. The company also has an inventory of 24 rigs that can be brought back into service with investment of approximately $2-$8 million each, according to **Ed Jacob**, Senior Vice President, Domestic Operations.

Drilling contractors with smaller fleets are also running at virtually 100%. **Ray Brazzel**, owner of **Bandera Drilling,** which works primarily in the Permian Basin area of Texas, has five rigs running, with two additional rigs that are not actively marketed. The company has been working in the Permian Basin for the 30 years since Mr Brazzel founded Bandera.

The company is always rebuilding one of its rigs, according to Mr Brazzel. So when one active rig is finished with a project, it is brought into Bandera's yard for refurbishment while the most recently rebuilt rig enters the active fleet.

"It appears the market is going to remain strong for a while," Mr Brazzel said. "In 2004 we drilled 129 wells, and that was an average year for us."

Big 6 Drilling, which operates two rigs, principally within a 200-mile radius of Houston, and occasionally in southwest Louisiana, has been operating non-stop since early 2004.

"Companies are constantly going back into old fields and reprocessing or shooting new seismic to re-evaluate old fields and trying to find something that someone else missed," said **Mike Stone**, Vice President of Big 6 Drilling.

"It's been mostly 100% utilization since January 2004," he added. "We've been keeping them working steadily."

VARIED CONTRACTS

Most of the rigs working these days are on dayrate contracts, with some footage and a few turnkey contracts thrown into the mix. While drilling activity is high, many rigs still are on a well-to-well basis although some term contracts are beginning to be seen. Indeed, many drilling contractors would prefer to remain on a well-to-well basis to take advantage of rising dayrates rather than be constrained by term contracts, although that is not always the case.

In one instance, a contractor is building 10 new rigs to be operated under three-year term contracts. **Helmerich & Payne International Drilling Co.** will build and operate 10 new FlexRig4 rigs for **Williams Production RMT Co** under a minimum three-year contract for a set dayrate, plus contingent incentive payments. Williams will use the new rigs to develop its acreage in the Piceance Basin in western Colorado. The first new rig will be delivered in November 2005 with subsequent rig deliveries every 30 days.

Other contractors have most of their fleets under well-to-well commitments but look toward term contracts under certain circumstances. For example, Nabors has only a handful of term contracts but would prefer a term charter if it assembles a rig that includes particular specifications for an operator.

"It's possible that we'll see more term contracts," Mr Smith said. "It's driven by the customer more than anything. I think the contractors generally insist on a term when they have a rig in which they put a lot of capital for a particular operator."

On the other hand, Mr Smith noted, an operator might want to tie up rigs on term so it knows the economics over a period of time rather than having to renegotiate price or take a chance of losing a rig in today's tight market.

"The downside for the operator is what the future holds on price and availability," Mr Smith added. "Is (the market) going to get softer?

"It's hard to foresee that right now but it's happened in the past."

Nabors Rig 304 is drilling a series of deep wells for a major operator in the Tuscaloosa trend in Louisiana. One of the wells resulted in a drilling curve that bested the operator's technical limits .

About a third of Grey Wolf's marketed fleet is on term contract. They are signing more, according to Mr Jacob, and the company expects that figure to increase.

"Long-term contracts are for a year or more," he noted. "They are being signed because dayrates are increasing and the customer thinks there may be more escalation in rates.

"This enables an operator to hedge his product and at the same time fix his cost by locking in a dayrate and remove the variables from his economic model."

Mr Jacob also said Grey Wolf will not reactivate its rigs unless the company has a long-term contract that will enable it to get the majority of its investment back during the contract term.

"We are not going to take financial risk," he explained.

Patterson-UTI is a company with a different philosophy. Its budget schedule calls for reactivating five rigs per quarter as long as the market allows. The rigs go through a $2.5-$3 million refurbishment and reconditioning before re-entering service. The company said it doesn't require a term contract to bring a rig back into service although it would require a contract.

"Contracts are coming in faster than we can get the rigs out," Mr McBride noted. "We wouldn't require a term contract to bring a rig out of cold stack but we would want to see a multi-well contract and right now rigs are coming out with multiple wells behind them.

"We wouldn't reactivate a rig if we didn't have a good feeling that the rig could go to work and stay busy," he added.

The company has signed a few term contracts to the extent that some of its customers prefer to run contracts with a specific ending date and then readdress pricing for a rig or group of rigs by the particular date. This may mean that pricing changes during the middle of drilling a well.

A few companies still work on a footage basis rather than dayrate or turnkey. Bandera Drilling has been working on a footage basis since its inception.

"We are one of the last footage contractors around," said Mr Brazzel. "I don't know anyone else in the (Permian) Basin that is drilling footage.

"When they drill on footage, the operator knows what their cost is going to be. When they are on dayrate, they don't know what it's going to cost until the end of the well."

In 2004, Bandera drilled 845,473 ft and averaged 6,554 ft per well.

Turnkey drilling is another option for the operator. Mr Stone with Big 6 Drilling, which operates two rigs, said the company doesn't do much on a footage basis but a good percentage of its work is done on a turnkey basis. "That's where our company got started in the late 1940s. We continue to do a good percentage of turnkey and are still actively quoting turnkey bids.

"It depends upon the well," he continued. "We usually don't quote on deep, high pressure, highly deviated wells that require several strings of casing because they are so expensive that by the time we add a decent margin to the well costs, it's not economical to the customer."

Grey Wolf typically has an average of 8-10 rigs drilling turnkey wells throughout the year, with the strongest activity for the company found in South Texas, South Louisiana and in Mississippi.

Nabors Drilling's Rig 413 is working for a major operator in the Rocky Mountain region of Wyoming. The 1,000 hp rig was completely rebuilt and reactivated last February.

"The 8-10 rigs drilling turnkey wells is about what we've averaged over the last few years," said **Joey Hopewell**, Vice President, Turnkey Services for Grey Wolf Drilling.

"It's been pretty flat, and we haven't seen that level go either way."

Patterson-UTI does a small amount of turnkey drilling but generally stays away from turnkey in an up market such as the industry is presently experiencing.

DAYRATES NEARING HIGHS

Dayrates have increased dramatically during the past year, and many expect them to continue to rise as long as the market continues the way it is presently.

The market nearly made up for the drop in dayrates since 2001 and is near the top rates seen then. While dayrate increases vary by region, generally they are up perhaps 50% during the past 12-18 months.

"Dayrates are starting to approximate the highs of 2001," Nabors' Mr Smith said. "In 2001, the average dayrate got to the $14,000 mark, ranging from $10,000 for small rigs to $18,000 for large rigs.

"Now the leading edge for the average is starting to price at the high levels, but not the whole fleet average yet," Mr Smith continued.

One contractor also noted that the present market is close to the 2001 highs. This contractor said rates in 2001 were about $14,000 per day for a 1,000 hp rig, $15,000 for a 1,500 hp unit and $17,000 for a 2,000 hp rig.

The contractor said it is within 10-15% of reaching the 2001 peaks and expects dayrates to continue to increase as long as demand remains high.

However, while dayrates have increased and are expected to continue to do so, profitability still wasn't back in the industry jargon generally until late 2004 for some contractors.

"As we geared back up, we had to increase wages again and we had other costs creeping in," Mr Smith explained. "Profitability didn't begin improving until the latter half of 2004, so while dayrates are approximating the highs of 2001, margins are not.

"The differential is cost," he continued, "so rig profitability is not like it was in 2001 although the average dayrate is closer."

INCREASED COSTS

Rising equipment and other costs have impacted the contract drilling industry, as Mr Smith noted earlier. Different contractors, of course, are impacted in various ways.

Smaller companies without the buying power of the large contractors are sometimes paying higher prices and having to face longer delivery times as well.

Mr Stone with Big 6 Drilling notes that 4 ½-in. drill pipe from one of its vendors was about $30/ft a year ago and now the cost is at least $40/ft and higher. The company also said casing it buys for turnkey work is more expensive and its cost continues to increase.

"When I quote a turnkey job the customer has to agree to pay any incremental costs from the time of the bid to the time we get the job," Mr Stone said.

While Mr Stone says he has not yet run into delivery problems for tubulars or other equipment, some suppliers that he has talked with tell him that drill pipe could have a six month delivery time from when the order is placed.

Certain weights and grades of casing are also in short supply and customers have reported delays in wells due to delivery concerns, he said.

"We are always buying new equipment and costs are extremely high," Mr Brazzel with Bandera said. "I'm talking about drill pipe, BOPs, iron roughnecks, everything we use.

"It's probably been climbing over the last two years," he continued. "Drill pipe prices are roughly the same this year as last year but they were probably up 40% last year from what they were two years ago."

"The price of steel has been a big influence in the cost of drill pipe and casing," said Nabor's Mr Smith. "During the period when steel prices began escalating sharply we weren't buying that much pipe.

"We didn't start buying a lot of pipe until last fall so when we renegotiated the price I'd say it was up 20-25% from what we were paying a few years ago.

"We have a pretty good contractual agreement on the volume we buy and it is available, but deliveries are getting longer," he concluded.

In the context of reactivating rigs, Mr Smith said that cost has increased radically. "In terms of cost for equipment, machinery, engines, etc.," Mr Smith said, "costs have not seen super increases, but because the rigs left to refurbish are in less shape and they are less complete, it is more expensive to bring the rig back into service."

Mr McBride with Patterson-UTI agrees: "There is movement in prices but probably one of the biggest things is delivery," he said. "Delivery time is beginning to stretch out and it could potentially be a problem with bringing additional rigs to the fleet.

"Deliveries could be months in some cases," he continued. "Part of the problem is that with demand of new equipment (as low) as it has been during the past 10 years, a lot of (manufacturers) have gone out of business so there are not that many places left to purchase necessary equipment."

Mr McBride also noted that due to the lack of new equipment orders during the past 10 years, manufacturers are not geared up to turn out a lot of new equipment.

Casing costs have increased 100% from a year ago, according to Mr Hopewell with Grey Wolf.

"The cost was $25-$30/ft a year ago and now is around $55/ft," he said. "Steel prices are generally higher, demand has increased and casing is in short supply, even internationally.

"Increased casing and drill pipe costs could affect turnkey drilling to the extent that higher bids could affect drilling," he said.

"Because the higher cost will be passed on to the operator through a higher turnkey bid, if a well is marginal to begin with, the higher cost could result in the well not being drilled."

PERSONNEL ALWAYS AN ISSUE

Finding good qualified people to work the rigs has always been a problem for the contract drilling industry. Turnover is always an issue, in good and bad times.

"Finding incremental personnel as we ramp up is tough," said Mr Smith, "particularly good qualified people, but it is probably not as difficult now as it was in early 2001 when the industry ramped up very sharply.

"The activity increases have been more gradual through this cycle," he said, "and that helps a little but it's still a big problem.

"There is a higher degree of turnover from new hands than the existing workforce but it doesn't inhibit us from doing things, although it does create cost and sometimes inefficiency.

"One of the things the customer is focusing on this time around is a more steady continuous operation and not rapidly changing, and that makes a big difference," Mr Smith concluded.

"The area that has been the biggest (personnel) challenge for us has been in the Rockies, for several reasons," Mr Jacob said.

"A number of industries draw off the same labor pool, particularly in Wyoming, the least populated state. It is the highest activity level in the history of the Rockies.

"Also, there is an incredible drug and alcohol problem," he noted.

Like other drilling contractors, Grey Wolf has a zero tolerance for drugs and alcohol in the workplace and it is difficult to find people that can pass a drug test, according to Mr Jacob.

"We have seen the drug problem in all the areas, but it is more of a problem in the Rockies," Mr Jacob explained.

To help alleviate the personnel problem in the Rockies, according to Mr Jacob, Grey Wolf has crews coming from South Dakota, Idaho, Utah and as far away as Oregon.

Bandera doesn't have a large problem with turnover, according to Mr Brazzel.

"I think a lot of people have a fairly significant turnover. We don't go up and down, we stay at five rigs. We don't lay anyone off and we don't start up additional rigs," he explained.

"When our rigs are down, the crew comes to the yard and works, we don't lay them off." ■