OTC .05 SHOW DAILY

Offshore Engineer

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Submerged CT promises deep intervention savings

A new subsea intervention module (SIM) developed by ExxonMobil is described as 'a low cost, rapid deployment alternative for deepwater subsea well interventions to perform coiled tubing or coiled tubing conveyed logging operations'. Under development for years, ExxonMobil revealed to a by-invitation only audience at OTC that it is ready to commercialize the technology and to make it available to the industry through licensing agreements with oilfield service giant BJ Services (**Booth 5527**) and supply vessel operator Otto Candies.

'[SIM] is designed to deliver a 3:1 speed ratio over conventional practices such as semisubmersible MODU type rigs,' says Mike Krall, vice president ExxonMobil Development. 'It is fast, low cost and a quite interesting piece of technology. In the long term, SIM will provide the industry with an approximate 85% reduction in costs.'

The system was designed to a standard configuration adopted by ExxonMobil as early as the 1998 Hoover-Diana installation that includes a horizontal tree on a 36in structural casing.

At a cost ExxonMobil equates to about half that of a MODU, the SIM system is made up of two distinct but integrated parts: the SIM Tool made up of a subsea coiled tubing system, and a purpose-built SIM Vessel that provides deployment, control and other support.

The system's most dramatic diversion from the traditional is to move the coiled tubing unit itself from its position on the deck of a MODU to atop the subsea wellhead in water depths ranging from 2000ft to 6000ft. Deployed from the SIM vessel, this tool provides fluids from surface to seabed, remotely controls its power and controls, and, according to ExxonMobil Drilling Company project executive Greg Browning, operates much faster and cheaper to deliver enormous savings.

The SIM vessel is a dynamically positioned (DP2) vessel with an active and passive compensated deployment system. It is, says Browning, about 1.5 times the size of a standard offshore stimulation vessel. It has a large moonpool, 750t single wire deployment system, accommodation for 100 plus people, a mission control center and twin workclass ROVs. The vessel also holds all the fluids tanks, pumps, methanol and other systems needed for the types of subsea intervention work for which SIM was intended.

But it is the SIM Tool that Browning calls the heart of the invention. 'The tool is the focal point of SIM,' he says. 'It is a coiled tubing module and BOP module. The coiled tubing unit is everything you would see on land. The BOP module is a differently configured BOP module that provides the redundancy and control we need for subsea reliability and protection. But submerging the CT was the technical achievement.'

The two SIM Tool modules can be separated and retrieved independently but are launched as a single unit from the vessel and latched to the subsea wellhead via an H4 center hub connector. The coiled tubing unit is equipped with a reel and injector, gooseneck, a tool carousel for bottom hole assembly (BHA) changeouts, controls and hydraulic motors.

In actuality, the SIM system includes two coiled tubing strings, one on the deck of the SIM vessel and a 2in conventional string at the seafloor that travels in and out of the well. The coiled tubing from the deck is a concentric 2⅜in by 1in coil tubing that provides two flow paths for fluids to the SIM tool so that treatment fluid may be pumped down one line while methanol for hydrate control is pumped down the other.

The unit also has a storage and carousel device that allows changeout subsea of 20 bottom hole assemblies that are 24ft in length. The carousel rotates like a gun cylinder and uses a BJ Services patented connection device the service company had developed for remote BHA changeout in high-pressure coiled tubing operations.

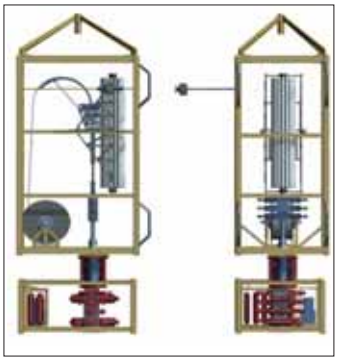
The BOP systems are 10,000psi rated but due to the behavior of some components when submerged the device is rated for a 6000psi working pressure. And while it is configured differently than most with a five-valve BOP stack, the hardware is proven.

In the event the redundancies built into it should prove inadequate, the two SIM Tool modules were designed to allow retrieval of the top module [coiled tubing unit] while leaving the BOP in place and the well secure.

Early in the process, designers recognized the fact that in order to build a SIM vessel significantly smaller than a MODU they would have to solve the problem of fluids returns.

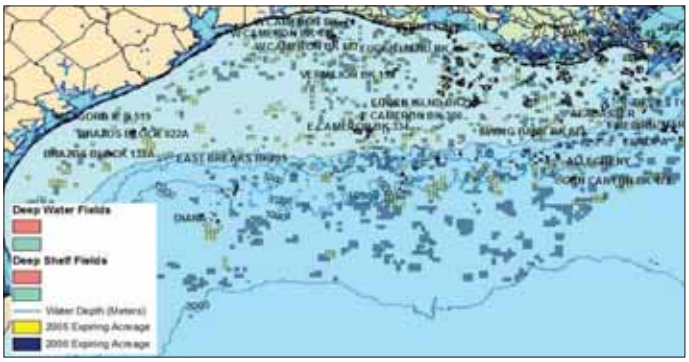
'What has always happened is that every time you try to bring returns back to the vessel, by the time you put in safety kit and separators the vessel grew to the size of a MODU,' says Browning. 'So we recognized early on in the intervention design process that there is another flow line that goes back to the facilities, in our case mostly FPSOs. If you design the flowline right and go through the engineering there is a very clever way to use that flowline to take return fluids. So our fluids either go to the reservoir to stay or the returns go down the flowline and back to the FPSO treatment facility. That in a nutshell is what SIM is.'

Rick von Flatern



ExxonMobil's SIM Tool is supported by a purpose-built DP2 vessel.

Inside



Channel sands shift US Gulf E&P focus

Channel sands have emerged as a key focal point for operators in deepwater US Gulf of Mexico at a time when production/reserve ratios have increased from historic lows of 10% to recent highs of 30%, according to a new report from IHS Energy (**Booth 5010**).

These conclusions, along with those showing recent finds have shifted toward gas, are among the many drawn from the company's Deepwater Production Performance Study, an in-depth analysis of 72 US Gulf fields (67 active) in water depths greater than 1000ft and reservoirs made up of deepwater facies.

'We were surprised at the increased emphasis on channel gas reservoirs when all of the production performance measures clearly point to sheet sands as the target of choice,' said Tom Harris, president of PetroSolutions, which teamed with IHS Energy to publish the study. Harris reckons the emphasis on channel gas reservoirs may be a function of seismic visibility along with robust gas prices and technological advances in the areas of completions and flow assurance.

● See full story, page 13.

Halliburton lands $24 million Shell drilling plum

Halliburton's Energy Services Group has been awarded a two-year contract, with the option for an additional year, by Shell Exploration & Production to provide 40% of Shell's integrated drilling services for their Gulf of Mexico activities. The value of the contract is estimated at $24 million for the fixed two-year duration and includes the provision of directional drilling, measurement-while-drilling (MWD), and logging-while-drilling (LWD).

'Halliburton is very pleased to have been awarded this significant contract, which expands our important relationship with Shell,' said Tim Probert, senior vice president in Halliburton's Formation & Drilling division. 'We have invested people, time, and money to stay at the forefront of technology development and ensure a sustainable future, aimed at meeting the current and future needs of our customers.'

Paul Goodfellow, wells manager, Shell E&P, said: 'The Shell Halliburton Real Time Operations Center will be of major help in the successful execution of this contract. The RTOC brings together drilling, exploration, and development teams to enable true multi-disciplinary well delivery. It is a world-class facility in which 24/7 well monitoring and the resulting interventions, real-time collaboration and decision-making are augmented with well planning for all Shell Gulf of Mexico rigs.'

Halliburton VP Brady Murphy said: 'We have been delivering integrated drilling and formation evaluation services in the Gulf of Mexico; the technology we will use will provide Shell with the best solution this industry has to offer and help them to meet their drilling challenges and maximize their reservoir deliverability.'

Bullish Petrobras on the E&P march

Officials from Brazilian state oil company Petrobras were on hand yesterday providing the latest update on their exploration and production activities both at home and abroad as well as results from new ultra-deepwater research and development efforts.

Heading up the delegation, Jose Miranda Formigli Filho (pictured right), Petrobras executive manager of production and exploration, said the country expects to reach its goal of oil self-sufficiency by next year buoyed by a recent spate of domestic production records, the most recent of which was 1.72 million b/d.

Of this growing trend in output, he said, 61% came from the deep and ultra-deepwater in 2004, with this figure continuing to rise, reaching 68% last month driven by new production from the Barracuda and Caratinga fields in the Campos Basin. 'Based on these figures,' said Filho, 'a study called The Future of Deepwater, carried out by Wood Mackenzie, Fugro and Robertson Research in December of 2004, concluded that Petrobras was the "number one" deepwater company.'

And, he added, efforts to increase production continue as Petrobras is envisaging its biggest capital expenditure budget ever with $9 billion earmarked for investment in E&P this year, up from an original plan of $8 billion. Filho attributed this rise to a change in valuation of the Brazilian real against the US dollar.

The vast majority of E&P investment is planned for domestic operations with some $1 billion planned for international activities.

Beyond production and planning, Filho also provided insight into some recent technological breakthroughs the company has achieved through its Procap-3000 deepwater technology development program.

The company will be undertaking the world's first installation and test of a subsurface tethered riser buoy, dubbed 'Big Buoy', possibly within the 'next few days'. This prototype is described as a 'big square-shaped steel cylindrical structure' that will connect rigid and flexible risers from a field's wells to a floating production unit, thereby reducing fatigue on the lines. Big Buoy will be installed 100m below the surface, at a water depth of 500m in the Campos basin and will undergo a three-month test to check all the installation procedures and monitor the behavior of the equipment.

'This is an idea that has been kicking around [in the industry] for sometime, but only Petrobras has gone so far with this project,' Filho claimed.

Also at an advanced stage are two new hull production unit concepts the company's R&D center has developed – FPSOBR, a new non-ship shape FPSO designed specifically for Brazil, and MonoBR, a short cylindrical mono-column floater. FPSOBR, he said, is closer to reality as it will be used on the Jubarte field in the near term while the company is still doing model analysis on the MonoBR and determining its proper future location.

Petrobras Americas CEO Renato Tadeu Bertani (pictured below) also spoke about what the future held for the company outside Brazil.

'We are making efforts to expand international opportunities and establish a growing and robust position,' he stated, pointing to statistics that the company produces over 260,000b/d of oil in international markets and holds interests in reserves calculated at 1.92 billion boe, including stakes in the deepwater Agbami and Akpo developments off Nigeria.

Of particular interest, he suggested, are three plays in the Gulf of Mexico in which Petrobras intends to invest $1.9 billion through 2010. In ultra-deepwater, the company has participated in four discoveries, Bertani said, while on the region's deep shelf the company is a partner in the ultra-deep Blackbeard gas find, as well as holding an interest in frontier acreage in the Corpus Christi quadrant in the Western Gulf. As part of this initiative, Bertani said the company will participate in seven wells this year, three of which it will operate, and a further four or five the following year.

Fear of spending hurting E&P

Oil companies continued reluctance to open their wallets to new exploration spending is proving to be a more pressing question for the offshore industry than the ultimate cost of financing future E&P, to judge by panelists' remarks at yesterday's OTC Energy Roundtable, 'Financing Offshore Exploration and Production: How Much Will It Cost?'

'There is plenty of capital out there [for future exploration and production],' says Wood MacKenzie senior vice president Simon Frame (pictured), 'but we might question the industry's willingness to spend it.'

The spending in question is to find reserves to replace those being drained by world demand that continues to grow, spurred mainly by the expanding economies of emerging nations and led by the likes of China and India.

Most new reserves, said panel moderator, Institute Français de Petrole chairman and CEO Olivier Appert in his opening remarks, will have to come from offshore, much of it from deepwater. Appert cited two major challenges in the coming decade besides demand growth including the debate over the timing of peak production and the affects of burning hydrocarbons on the environment.

As there are no real alternatives to fossil fuels, or in the foreseeable future, he said, if oil supply was to peak in the next decade it would be catastrophic for the economies so reliant on them.

Tom Petrie, CEO of Petrie, Parkman & Co, weighed in on future pricing for oil and gas, saying 'quite clearly oil will be a large part of the energy equation' through the first half of the 21st century. And, he added, while London-based magazine The Economist has gone from declaring the world awash in oil in 1999 to declaring the end of the oil age in 2003, the truth is somewhere in between.

'We are in the high hanging fruit mode,' he said, referring to the fact that most of easy to find and drill reserves has been captured. 'So the mid-cycle [pricing model] for around $20/bbl unrealistic and price stability should be around $50/bbl, give or take about $3/bbl.'

Dan Pickering, president of industry analyst Pickering Partners, said the industry is facing four distinct challenges in its quest to meet the world's growing oil thirst including physical assets – primarily rigs, people, technology and access to new acreage. Offshore rig utilization rates are about 85% at the moment, he noted, with about 6% warm stacked (in preparation to work) and 9% cold stacked (theoretically available).

Moreover he said, since available rigs are all at work in viable markets, it is unlikely they would move from their current locations. Further complicating matters, Pickering added, is the by now familiar demographic issue of an aging and dwindling workforce, where SPE members over 55 years of age outnumber those under 40 as young professionals opt for other industries. And though improved technology has allowed the industry to produce more oil per worker in recent years, the problem persists.

The issue of access to new acreage, mentioned by several speakers, has been complicated in recent years by the fact much of the best potential areas for exploration are in the hands of national oil companies who, Pickering says, 'not have the same agenda as consumers'.

Cable maker targets Brazilian umbilicals

Pirelli has announced that work has started on a new umbilical factory in the Brazilian state of Espirito Santo (Vila Velha) that will manufacture what the Italian company hails as 'the most technologically advanced cables in the market'. Due for completion by 2006, the plant will produce both thermoplastic and steel-tube umbilicals.

The overall investment for Pirelli amounts to around Euro20 million. The company is envisaging strong growth – more than 50% year on year – in the oil, gas and petrochemical umbilicals sector in the 2006-2008 period.

Valerio Battista, managing director of Pirelli Energy Cables & Systems, commented: 'The new Brazilian factory will consolidate our industrial presence in Latin America, an area which has always been strategic for the Pirelli Group, and will allow us to focus further on the high value added segment of special cables in the oil & gas sector.

'Such investment confirms our positioning in any highly technological segment of energy cables.'

Hardide homing in on Houston

HARDIDE, A UK-BASED PROVIDER OF ultra-hard wear and corrosion resistant surface engineering technology for the drilling, valve and pump sectors (**Booth 2380**), is looking to invest $5 million in a 20,000ft² plus sales and manufacturing facility which will employ up to 20 people in Houston over the next two years. A team from the UK will set up the facility and recruit and train local technicians.

The announcement was made at OTC .05 yesterday by UK Trade & Investment's director of international oil and gas business and engineering, Brian Gallagher. Hardide, which listed on the AIM market of the London Stock Exchange last month with a market capitalization of $25 million, is opening a sales office in Houston this week as a stepping stone to the larger manufacturing and processing facility. The latter will house two new state-of-the-art CVD (chemical vapor deposition) coating furnaces together with the necessary support equipment.

Chief executive Jim Murray-Smith commented: 'There is strong demand from the oil and gas drilling and downhole sector for a high-performance, cost-effective coating that will prolong component life and minimize downtime in extreme wear situations. Hardide has been proven to offer significant cost savings across the supply chain.'

CEO Jim Murray-Smith (*third from left*) with members of the Hardide team on their booth yesterday. PHOTO: MARSHALL DELUCA

TODAY AT OTC .05

For the early risers

'CANADA'S EVOLVING OFFSHORE OIL & GAS INDUSTRIES' will major on providing an overview of the country's reserves picture with a focus on recent developments in the Atlantic Canada region along with the current fiscal environment for investment in E&P. Hosted by the US department of commerce and the OTC board of directors, the industry breakfast will include updates from the public and private sector on the development of LNG import terminals in the region. Moderated by David Bohigian, director of the US department of commerce's office of policy of strategic planning, the session will be addressed by Nova Scotian minister of energy Cecil Clarke, Dallas-based consul general of Canada Jean-Michel Roy, Newfoundland & Labrador premier Danny Williams, and Anadarko Canada VP of gas commercialization Randall Kopjar.

Practice makes perfect

WITH THE INTERNATIONAL OIL INDUSTRY PUSHING INTO uncharted frontier areas in the hunt for new, large-scale reserves, local stakeholders are demanding that consideration be given to the sector's impact on their economy, society and environment. General session 'Best Practices in Local Content Initiatives' will look at how companies are balancing competitive priorities with corporate citizenship responsibilities. Moderator Roger Tissot, director of PFC Energy's Petroleum Risk Manager, will lead a panel that includes Anadarko Petroleum senior VP for E&P Robert Daniels, World Bank principal energy specialist Marc Heitner, Aker Kvaerner group executive VP Jon Erik Reinhardsen, and ChevronTexaco Overseas GM procurement, David Connor, in discussing specific successful local content programs.

Partners in progress

MORNING PANEL SESSION 'COLLABORATION Among Operators and Contractors in Deepwater and Ultra Deepwater Fields' will examine how operators and contractors collaborate and partner on financial and technical aspects to develop fields in ever-greater water depths.

The inherent risks and uncertainties in the field development process; ownership of deepwater hub platforms and pipeline infrastructure; leasing and operating vs ownership of FPSOs; subsea tiebacks and supply chain management; and ownership and implementation of technology will all be discussed within the context of risk-sharing practices.

Moderated by JP Kenny senior specialist Sandeep Khurana, panelists in the sessions are: Kerr-McGee VP of marine engineering Don Vardeman, Oceaneering Internatinoal chairman and chief executive officer John Huff, ChevronTexaco Energy drilling and production systems general manager Randall Kubota, Halliburton Energy Services VP, global projects, Mark McCurley, and Enterprise Products Partners senior VP, offshore and gas storage, Bart Heijermans.

Meanwhile, with digital energy starting to pay dividends through reduced operating costs, higher productivity, safer operations and increased production and reserve growth, panel session 'Digital Energy: Case Studies Explore the Value Proposition' will look at end-to-end connectivity, from downhole to the sales meter, with integration into the financial reporting systems.

Case studies and assessments performed by the industry's leading operators, service companies, and consultants will be presented covering topics such as: value creation through both cost cutting and rate and reserve growth; data integration, management and access, and standardization; real-time, remote field monitoring and control; and workflow processes and decision analysis and support.

Energy Valley chief executive officer Art Schroeder Jr and Petrotechnical Open Standards Consortium president and chief executive officer David Archer will co-chair the session.

The session will include contributions from panellists including Weatherford chief technology officer Stuart Ferguson, Vetco International chief executive officer Peter Goode, Shell chief information officer Grahaeme Henderson, ExxonMobil VP, upstream technical computing, Steve Comstock, Schlumberger Information Solutions president Olivier Le Peuch, and Statoil senior advisor on integrated subsurface work processes Peter Eilsø Nielsen.

Advance notice

THE GENERAL SESSION TOMORROW EXAMINES THE growing problem of an ageing workforce under the title of 'Demographics in Our Industry – Addressing the Upcoming Personnel Shortage'.

Also on tap will be panel sessions on 'Oil and Gas Reserves Estimates' and 'Crisis in Technology: New Business Models for a New Century'.

You may already know that natural gas is one of the most environmentally friendly fuels in the world. It produces almost no emissions of sulfur dioxide or particulates and leaves no solid waste behind, which means less impact on air and water quality. You may also know that natural gas demand is soaring; imports will have to double over the next two decades just to keep up. What you may not know is that ChevronTexaco is working with governments and partner companies to secure the largest deposits of natural gas in Australia for shipment to the US. A steady supply of cleaner fuel to light our homes and keep us warm? Sounds like a lot of g'days to come.

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'We must keep our eye on the prize to be had from the full integration of hardware, software, networks, data and our people.'
Philippe Chalon

'As the pace of new technologies increases and prices reduce in the future, the same core technologies will be available to many companies. The key differentiator will be how effectively a company can apply and integrate IT to meet their specific business requirements globally'.
Grahaeme Henderson

'Our distinct business principle is to put the money in to those areas of IT that, number one, will address our specific portfolio of assets, or, number two, those assets that we aim to get involved in,'.
Steve Comstock

E&P's 'i' on the future

With nearly 70% of current global oil production flowing from fields more than 30 years old – and peaking or in decline – oil companies are increasingly focused on information technology's role in helping the upstream industry face the 'challenges and opportunities' of the coming decade. **Darius Snieckus** reports.

Streamlining operational processes through information management systems – now the 'enabling' realm of e-, i-, digital and smart fields – is a subject that has been pushed toward the spotlight in the last few years as the oil and gas industry continues its two-front campaign to lower exploration and development costs while increasing and extending production from workhorse developments the world over.

Though IM has long been a keen supporter of the technology-driven oil and gas business, E&P companies are becoming more aware of the prize to be derived from an IM philosophy that 'connects the people, process, and technology of a function into an integrated, secure system so information can be captured, analysed, and utilised in a way that increases operational value', as Schlumberger Information Solutions (SIS) president Kjell-Erik Ostdahl pointed out at last year's Paris forum on IM organized by SIS.

IM, he said, was now hard-wired into every level of the industry, from the acquisition, processing and visualisation of 3D seismic and well data, through reservoir simulation to predict production performance, to back-office integration that curbs administrative expenses and IT-leveraged lower personnel costs. 'The basis of these accomplishments was, and remains, process-relevant information,' Ostdahl stated, 'available in the right place at the right time to achieve the right decisions.'

For Occidental Petroleum CIO Don Moore, IM – and its handmaiden, information technology – is viewed as a 'key enabler' in both the company's ongoing pursuit of new reserves and its efforts to 'moderate production decline rates' from its legacy assets. Through the move toward IM-empowered virtual E&P project teams, a 'plug-and-play workforce', remote drilling and operations and the 'perfect well index', Moore said Oxy was showing it was possible to reduce operating expenditure by 10-25% while boosting overall production by as much as 7%.

'Our assets typically have moderate production decline rates and the opportunity to raise our production by providing operational efficiencies and extending late field life, so we have been focused on developing enabling technologies, tools and processes with the help of IM and IT,' he offered, noting that his company could now turnaround complex plan-of-depletion studies 'in 2-3 weeks rather than 3-4 months'.

Steve Comstock, VP for upstream computing at ExxonMobil, stressed that while 'technology – information or otherwise – is one of the keys to being in the oil and gas business', it would not be used to greatest effect if applied indiscriminately. 'Our distinct business principle is to put the money in to those areas of IT that, number one, will address our specific portfolio of assets, or, number two, those assets that we aim to get involved in.' He added that ExxonMobil aimed to avoid reinventing the wheel in developing technologies that would benefit its asset base. 'We feel we have to be quick to identify those technologies that are commodity technologies, not investing in those areas where someone else is simply better at it than we are.'

The balance to be struck between developing IM systems and investing in the people who use them, in the eyes of ChevronTexaco CIO Gary Masada, is one that is increasingly important. 'When you change your information management and IT systems you have to make certain you change your business processes and [corporate] culture too,' he noted.

'Integration' remains at the core of Total CIO Philippe Chalon's thinking on IM. He underlined that notions of the omnipotent role to be played by IM in the future of the upstream industry should be set aside until the miscellany of IT-driven technologies are serviceably knitted together. 'We must keep our eye on the prize to be had from the full integration of hardware, software, networks, data and our people.'

The changes likely to be wrought by IT and IM in the global oil and gas industry could hardly be more transformative, in former Shell CIO Grahaeme Henderson's view, as they will 'create new opportunities to improve performance at every stage of the hydrocarbon lifecycle by speeding-up operations, removing duplication, sharing learning and standardising processes'.

'The key IT trends in E&P,' he said, 'will include the move from wired to wireless in the office and the field; from services taking time to be delivered to being available on demand from any location; from high cost one-off units to low-cost commodity items, and from limited intelligence, stand-alone devices to smart integrated systems.

Yet for any company to make this happen, said Henderson, IT and IM could not be developed in a vacuum. 'Regardless of the technological breakthroughs in the oil and gas industry next ten years,' he concluded, 'we can only be successful if we are able to integrate technology with our single most important driver of performance which will always be our people'.

AROUND THE BOOTHS

Booth 4263 – Tenaris

Making the right connections

TUBULAR MANUFACTURER TENARIS IS SEEKING TO build on its patented TenarisBlue design with a near-flush premium connection aimed at deepwater and other high-tech markets.

The first offshore installation of the TenarisBlue Dopeless connection was performed less than two years ago, in July 2003, by ConocoPhillips at its Ekofisk field in Norway. And a little over six months ago, the company hit another milestone when it ran its Dopeless CRA (corrosion resistant 13% Chrome alloy) string in the same field.

From analysis of the market and their own products, Tenaris perceived its international customers were moving towards slimmer wells with integral joints for smaller pipe to accommodate smaller clearances. Further they saw that operators were beginning to look to solutions such as slimhole wells as they drill into deeper, hotter, more complex formations and begin large programs where economics of scale can make that option very attractive.

Towards that end the company has rolled out its TenarisBlue Near Flush connection, a semi-flush connection with tension capacity designed to match any currently on the market, a 50% compression rating and connections tested to ISO 13679 level IV standards.

'Most of the connections now on the market are ten to 15 years old,' says Tenaris connections managing director Jim Aivalis. 'We now have utilized technology in the latest finite element analysis which was not available when many connections in the market were designed and many of the older designs were validated in tests that were less severe in many cases.'

Other features of the Near Flush include a large internal shoulder for very high compression strength, optimized thread profile and geometries, dual internal and external seals with a seal geometry based on TenarisBlue engineering designs and learnings.

And though they are not initially pushing it as a dopeless connection, Aivalis says a feasibility study is underway for that option. At the moment, Tenaris is setting up design and qualification programs for casing sizes 7in through 13⅝in.

The TenarisBlue Near Flush connection.

Booth 1817 – Genoil

Handling the heavy work

WITH AN INCREASING AMOUNT OF HEAVY CRUDE being discovered in areas such as Venezuela and Brazil, there is growing impetus for technologies aimed at making these difficult reserves more economical to produce through less costly and more environmentally friendly treatment procedures. One such system geared toward that end is Genoil's GHU (Genoil Hydroconversion Upgrader). It converts low value heavy oil, bitumen or refinery residue and turns it into light synthetic oil that can be used for transport fuels among other products. The to demonstrate the system company owns and operates a 10b/d pilot hydroconversion upgrader, complete with independent water electrolysis unit for pure hydrogen supply, hydrogen compressor, electrical substation, fired heater, low-pressure separator for vapor-liquid separation and PLC for automated operational control.

The first commercial GHU is being installed at the Silver Eagle refinery in Utah in order to optimize yields of light fuels and reduce exposure to catfeed (heavy vacuum gas oil) and asphalt markets with the value added to each processed barrel expected to exceed $10 per barrel. It will be commissioned late this year.

Show on the go

OTC visitors are again given the option to download show details to their handheld PDA's or SmartPhones in order to maximize the time spent at the event.

Attendees can go to www.nearspace.com/guides/OTC2005 and download items such as daily schedules, session descriptions and locations, floor plans, exhibitor information and venue and local area maps in the Palm OS or PocketPC format. This will allow users a greater opportunity to manage their time by using the downloaded information to build a personal itinerary on your handheld device or with your laptop, prioritize a list of exhibitors to visit and quickly find on the map, generate an electronic trip report with a list of follow up actions and contact information or synchronize sessions with your Outlook calendar.

AROUND THE BOOTHS

Booth 3925 – CapRock Communications

Going wireless

A leading satellite providers has announced expansion of its broadband services into the realm of wireless communications.

Houston-based CapRock Communications is now offering a new service, known as Wireless IPxpress, which enables customers in remote locations to connect laptop computers, PDAs and other broadband hungry wireless devices back to the corporate network.

While the new service is similar to the concept of a typical WiFi 'hot spot', the company says it is much more. 'Wireless IPxpress combines standards-based 802.11b/g technology with our exclusive IPxpress architecture and global satellite services to create an enterprise-class wireless local network connection that has been designed exclusively for extreme environments,' says company vice president of marketing and product management David Myers.

The company adds that the new service will enable customers to benefit from CapRock's Follow Me Networking over a wireless LAN, something previously available only through a wired Ethernet connection. This is ideal for customers with roaming personnel that frequently move across their remote locations or fleet of vessels.

'Wireless IPxpress allows those personnel to move from any site in the CapRock network to any other and use their wireless card to link securely to their corporate network – all without any reconfiguration of IP addresses or telephone numbers,' Myers adds.

CapRock was also recently named Teleport Developer of the Year by the World Teleport Association (WTA). The WTA presented the award during a ceremony held at the Satellite 2005 conference in Washington DC on 23 March. In a single year the company has constructed and commissioned 16 hub earth stations and expanded its global operations across four international teleports.

Booth 3317 – Halliburton

Gains by stopping fluid losses

Deepwater and deep gas wells are often plagued by considerable and costly fluid losses. Halliburton's Baroid Fluid Services is presenting its new Accolade system which the company says, when used to formulate drilling fluids in a series of deepwater field trials, minimized the problem through increased rheological properties control.

The company also says the use of Accolade technology allows, for the first time, drilling fluid systems to be formulated with paraffin or internal olefin base fluids while still retaining a clay-free composition that sets the technology apart from conventional invert emulsion fluids. According to Baroid Fluid Services senior vice president, Art Huffman, an operator 'using the new paraffin system was able to drill and run casing with substantially lower losses' than were seen in offset wells during a deepwater field trial

Increased interest in high-temperature deep gas plays, he says, was a factor in the introduction of the new internal olefin Encore system with the Accolade technology. 'The Encore fluid overcomes the temperature limitations encountered with ester-based fluids, while maintaining the operator's ability to handle cuttings in an environmentally safe manner,' he says.

Booth 3171 – Sondex

Downhole battery deal signed

Logging and MWD instruments supplier Sondex has signed an agreement covering rechargeable, high temperature battery technology with fellow UK company Beta Research & Development.

The agreement provides Sondex with exclusive rights to Beta R&D's advanced battery technology, currently under development, for use in the downhole oil, gas, water and geothermal industries. Sondex is looking to the battery, based on existing automotive 'Zebra Cell' technology, to provide a 'cost-effective, robust and reliable' alternative to the lithium batteries that are currently used for memory tools by downhole operators.

Beta R&D, which currently supplies advanced battery cells to the automotive industry, will continue to refine the technology for use in the downhole environment while Sondex will develop the associated electronics and packaging.

'We are very excited with the potential for this battery and believe that there will be a significant worldwide market for this technology,' commented Sondex chief executive Martin Perry. 'We are also delighted that the battery complements our own range of downhole tools so well.'

AROUND THE BOOTHS

Booth 3741 – National Oilwell Varco

Drilling on cruise control

National Oilwell Varco is showcasing its recently piloted M/D Totco Performance Drilling Package (PDP) consisting of RigSense, its rig site instrumentation and information system, MSE (Mechanical Specific Energy) tool, Wildcat ADS (Automated Drilling System), and WellData (the real-time web-based interface to rig based information).

MSE measures the energy used per volume of rock drilled, while the drill team focuses on the optimization of weight-on-bit, bit RPM, and drill string torque, drilling faster and achieving maximum ROP. MSE has been used to quantify bit design efficiency in terms of energy required to drill a rock vs. the compressive strength of the rock. Using ADS to control and RigSense and WellData as the decision support tool, PDP has set new records for fields previously worked. Observations from the pilot program include fewer bit trips used and a noticeable actual ROP increase over plan.

Also on the booth is M/D Totco's RigSense Report Management Services (RMS), being touted by the company as a means to better meet the corporate governance requirements, tighter accounting controls, more timely decisions and streamlined operations through standardized paperless reporting.

M/D Totco's Wildcat Electronic Automated Drilling System (EADS) introduces an electronic based control solution to maintain key drilling parameters as set by the driller. The electronic version of the highly successful pneumatic auto driller promises to extend the driller's preferred 'cruise control' system to include time drilling functions that support directional drilling requirements, while maintaining traditional needs for controlling weight on bit and/or pump pressure.

This new 'time drilling' feature allows the driller and directional team to drill at a specific rate, eg feet or inches per minute. Time drilling is primarily used to mill an opening into the side of the casing and to re-enter that hole after a cement plug has been installed.

Booth 2275 – Quantapoint

Offshore documentary

It seems that most platform modification projects are generally fraught with delays for various reasons. Whether it is lack of information, project cost and schedule forecasts of marginal accuracy or other issues, solving these problems requires highly accurate, complete and easily transportable documentation of as-built conditions. Unfortunately, in the offshore environment, this documentation is often unavailable, obsolete, or of questionable accuracy.

Quantapoint, however, a provider of as-built documentation using laser scanning located in Pittsburgh, has completed nearly 700 as-built laser documentation projects and has been authorized to work on more than 30 different offshore platform projects.

The company rapidly collects, integrates and verifies billions of highly accurate measurements to provide a consistent and complete 'digitized platform' of easily shareable as-built laser documentation, without costly and time-consuming remodeling. The digitized platform can be easily shared across the entire project team as interactive photo-realistic 2D or 3D images that provide more accurate and complete information for design, fabrication and construction decisions, including accurate dimensional fit-up, pre-fabrication and clash detection.

Through this documentation, the company says it can help offshore facility owners, operators and project teams reduce project rework, 'hot work' and site visits by at least 50%, resulting in major cost and man-hour savings.

● On Wednesday the company is also hosting a complimentary seminar and breakfast on the benefits of laser scanning for offshore facilities and equipment (Room 606 on the second level of Hall E from 08.00 to 09.15.)

Booth 4741 – Modec

Mutineer on the bounty

Modec is celebrating the successful startup of its latest FPSO delivery – for Australian independent Santos on the Mutineer-Exeter field some 150km northwest of Dampier off Australia's northwest coast.

The Modec Venture 11 (pictured) was converted from an existing double-hull Suezmax tanker in Singapore's Jurong shipyard, with Modec taking responsibility for the FPSO's engineering, procurement, construction, installation and commissioning including the topsides processing equipment and disconnectable internal turret mooring system.

Installed in 156m (512ft) of water, the FPSO has an oil processing capacity of 100,000b/d, gas handling of 2·3mmscf/d, produced water treatment of up to 125,000b/d, topsides water injection facilities for 150,000b/d and storage capacity of 930,000 barrels.

Modec will own and operate the FPSO for a mimimum five years with possible extensions. 'We are pleased to achieve the first oil from the Mutineer-Exeter field on time despite its tight schedule,' said Kenji Yamada, Modec president and CEO. 'This is the third FPSO we will operate in Australian waters and we look forward to working with Santos in the flawless operations of the FPSO.'

Booth 4577 – DNV

JIP runs the rule over riser integrity

DNV HAS RESPONDED TO RECENT SPILLS and riser failures with the launch of a joint industry project aimed at developing a recommended practice on riser integrity management. The JIP is supported by five oil and gas majors, seven specialist companies and the major regulatory bodies.

'An integrated lifecycle integrity management approach for riser systems is cost beneficial and an integral part of good technical and business risk management,' says Knut Ørbeck Nilssen, DNV's technology director.

The new recommended practice will cover top tensioned risers (TTR), steel catenary risers (SCR), flexibles and hybrids, addressing both existing and new risers for both shallow and deepwater.

In developing the new recommended practice, realistic riser integrity management case studies for various riser-floater concepts and different environmental conditions will be used, for example TTR in the Gulf of Mexico, SCR in West Africa, riser towers in generic deep waters and flexible risers in the North Sea.

'The motivation for focusing on riser integrity management comes from the oil and gas industry itself,' notes Nilssen. 'Production is moving to deeper waters in new areas, and experience of operating under new conditions is limited. The lack of both validated and proven instrumentation strategies for deepwater risers and real-time data can significantly increase the risk of critical riser components failing.'

AROUND THE BOOTHS

Booth 4241 – Framo Engineering

Cable-free ESP ready to roll

SINCE THEY MADE THEIR COMMERCIAL DEBUT BACK IN the 1980s as the main seawater lift pumps on Norway's Heimdal platform, Framo SE concept pumps have been through a number of improvements and updates.

Having already proven its reliability in high-capacity applications such as refinery cooling water pumps, the company's hydraulic design now covers capacities up to 20,000m³/h against heads between 30-60mwc.

High capacity seawater pumps are in LNG service both for cooling in the liquefaction process and as heating in the vaporisation process. The compact, low-weight design is said to eliminate alignment issues related to long shafts. 'With alloyed materials such as super duplex normally specified on such projects, Capex saving is also considerable,' says Framo. Further savings have been achieved by adopting the combined caisson/riser pipe solution, first introduced on the Mongstad crude oil caverns in 1987 and since employed for a similar application in Korea and more recently on Mongstad's 'Vest process project'.

Framo reports that two seawater cooling pumps each with a capacity of 6500m³/h and motor rating of 1650kW have been operating perfectly since 2002, the end suction design facilitating their use in FPSO and FLNG projects. Already on the reference list for this design are FPSO projects such as Norne, Dalia, Ehra, P-50, P-54 and Greater Plutonio.

The end suction design is now also being introduced for butane service applications in the form of a two-stage pump (pictured) with a capacity of 1700m³/h – 270mlc and a motor rating of 1110kW.

Booth 4441 – Rapp Bomek

Snow White stepout

WELL-ESTABLISHED IN THE OFFSHORE MARKET, where its explosion- and fire-proof doors have had to contend with the harshest North Sea conditions, Rapp Bomek reports that its products are today also being exposed to altogether different environmental challenges.

While FPSOs and FPUs around the world remain the principal market for this highly specialised company, Bomek has over the last couple of years also supplied sophisticated fire doors to a number of high-profile and equally tough land-based projects. One such project is Statoil's state-of-the-art Snöhvit or Snow White LNG terminal, located in the sub-zero climes of the Norwegian arctic where tanker export shipments to the US and other markets are scheduled to start up next year. In sharp contrast, the Bodo-based company has also been busy supplying large onshore heavy fire doors to Saudi Arabia.

Among recent product developments at Bomek has been the startup of in-house manufacturing of fully certified A-60 rated fixed windows (pictured), fire- and hose stream tested according to IMO res A754. Other fully watertight products are in the pipeline for testing and certification later this year.

Booth 2017 – Halton Marine

Smoke tight fire dampers

HALTON MARINE LAYS CLAIM TO HAVING THE MOST widely sold marine fire damper in the world. Now, ten years after the original product came on the market Halton has launched a successor and, says the Finnish-based company, the construction of the new FDB2 A0(A60) range includes a novel patented blade structure which ensures even tighter dampers than before.

Leakage tests carried out at independent laboratories show that the tightness of FDB2 (pictured) in cold conditions not only meets but is substantially better than the 300m³/h/m² 2000 Pa Norsok requirement.

Typically steel transformations during fire increase damper leakage, but Halton claims fire tests on its FDB2 dampers with seals indicate not only tightness in cold conditions but also substantially improved tightness of the damper, by as much as 50%, during fire.

Booth 3309 – Schat-Harding

Floater in freefall

LIFEBOAT AND DAVIT SPECIALIST SCHAT-HARDING HAS completed the installation of three sophisticated freefall lifeboat systems at Statoil's Veslefrikk B platform, the first permanent floating production unit in the Norwegian sector of the North Sea.

Statoil decided to replace the platform's seven conventional lifeboats with the new freefall systems in order to improve safety and to reduce critical evacuation times in the event of an emergency. It was also able to retire the standby vessel Siddis Pilot, with a consequent OPEX saving of around NKr25 million annually.

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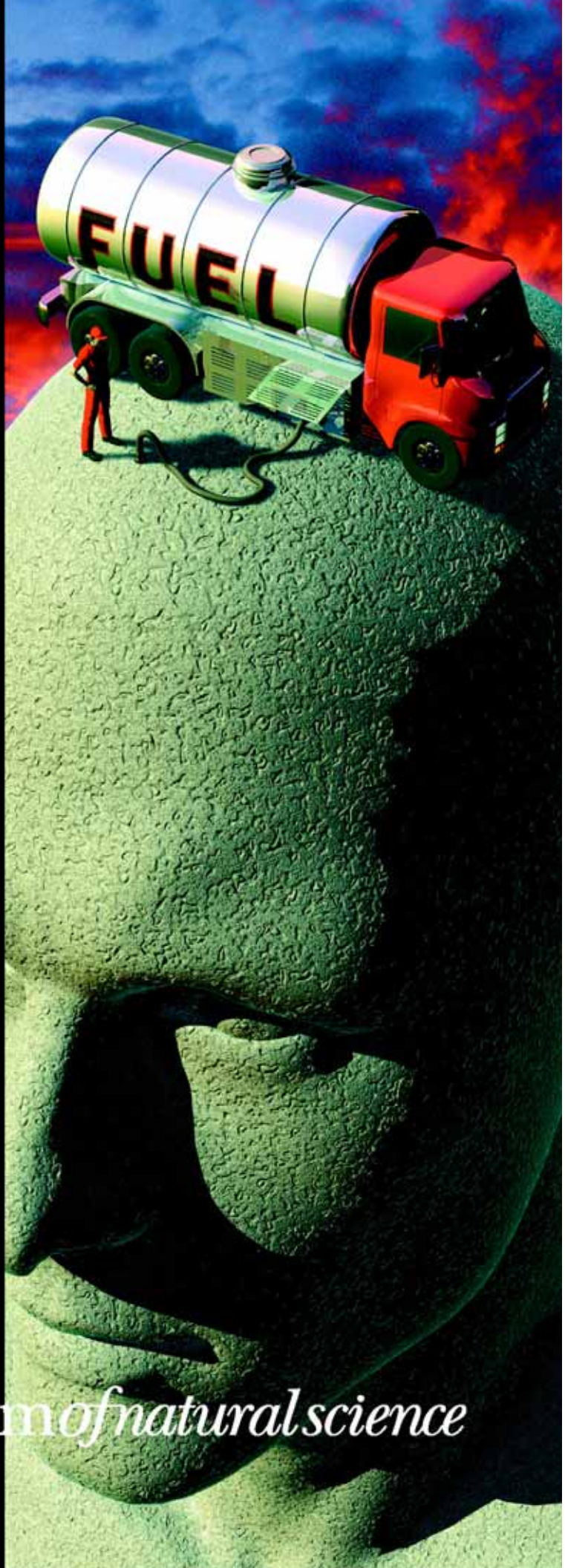


the Houston Museum *of natural science*

AROUND THE BOOTHS

Booth 2601 – Wild Well Control

Houston homes in on well control

THE TRAINING DIVISION OF BLOWOUT AND FIRE control specialist Wild Well Control opened its second permanent well control training facility in the US early this year. Located within the company's drilling technology center in Houston, the new facility features two fully-computerized classrooms and a state-of-the-art simulator employing real chokes and equipment.

Like the company's other facility in Casper, Wyoming, and its various traveling schools, the Houston base offers training at all levels including introductory, fundamental and supervisor accredited under the IADC's Well Control Accreditation Program (WellCAP). These courses include certification in drilling, both surface and subsea, well completion and workover, well servicing, including coiled tubing, snubbing and wireline, or any combination.

The new facility additionally lays claim to being the only one to offer two new advanced-level training programs – the IADC WellCAP Plus curriculum and the Accelerated Supervisory Well Control class, both offered through August. WellCAP Plus is a brand new three-day course offered in only a few locations worldwide and open only to well control supervisors with two prior supervisory level well control certificates. The curriculum is based on IADC-approved case histories and focuses on a team approach using an IADC problem-solving template.

The Accelerated Supervisory Well Control class offers a shortened, more customized format with a heavier accent on simulator activity. Also for supervisors only, this two-day course includes a compressed review of the basic skills to meet IADC requirements, but also places more emphasis on complications and complex issues solved through extensive simulator exercises. Three programs are available within this curriculum: drilling, drilling/workover and drilling/workover/well servicing.

Well Control Training's new simulator training room in Houston.

Booth 2253 – Advanced Valve Technologies

Compelling case for composites

UK VALVE MANUFACTURER ADVANCED VALVE Technologies (AVT) has made something of a speciality out of applying reinforced composite technologies to valves and related products in the chemical and marine markets.

Now, buoyed by encouraging feedback from Norwegian North Sea installations, the company is looking to make similar inroads into the offshore sector with its range of high-performance ball and butterfly valves. As well as weight savings of up to 60% over traditional metal products, intrinsic corrosion and marine growth resistance and minimal susceptibility to ultraviolet degradation, AVT reckons its products benefit from substantially increased life expectancy and a manufacturing lead time saving of between 30% and 70%.

According to AVT, field experience gained with reinforced composite ball valves on Statoil's Gullfaks C platform over the last five years offers 'compelling' evidence that the technology is 'eminently suitable for offshore aqpplications'.

The company adds: 'Initially tested at Statoil's R&D engineering center in Trondheim, the valves easily passed a variety of tests on its valve testing facility and were approved for use . . . as replacements for traditional valves which had come to the end of their working lives.'

A new 'rapid install – rapid repair' in-line valve solution also features in AVT's OTC .05 display. Hailed as an industry first, the flanges in this series of in-line ball valves have been replaced with pre-installed pipe stubs for use with connector systems (pictured).

'The new system eliminates the need for skilled welding or jointing as it can be pre-supplied with couplings, make it ideal for tasks such as refurbishment of offshore platforms in countries where stilled labor shortages are common,' says AVT managing director David Falzani.

Channel sands shift US Gulf deepwater focus

The sharp rise in US Gulf of Mexico production/reserve ratios in recent years – from 10% up to record highs of 30% – is driving the offshore region's operators to look more closely at channel sand plays, states a new report from IHS Energy (**Booth 5010**). The shift away from sheet sands as 'targets of choice', revealed in the analyst's Deepwater Production Performance Study, which covers more than 70 fields in water depths of more than 1000ft, is explained as 'a function of seismic visibility along with robust gas prices and technological advances in the areas of completions and flow assurance', according to Tom Harris, president of PetroSolutions, which jointly published the report with IHS.

The study underscores the fact that the deepwater US Gulf continues to generate more active fields than any other deepwater arena worldwide, with a growing resource and production base, he said. Moreover, the region has witnessed an eight-fold increase in maximum flow rates and monthly production volumes during each of the last two decades.

In all, 550 completions for 467 wells were evaluated to reach the study's findings. These include:

- Of the 72 fields studied, 67 are active. The number of active producing wells in these fields range from one to 41. The median field size of the 67 has three active wells.
- Flow rates per completion for sheet sands averaged 11,000b/d; channel sands 6000b/d and channel levee sands 4000b/d.
- One well has produced almost 50 million barrels of oil; five gas wells have each produced in excess of 100bcf with rates exceeding 200 million scf/d.
- Deepwater oil reservoirs are initially undersaturated; three primary drive mechanisms have been recognized: fluid expansion, aquifer influx and formation compressibility.
- Based on geocellular modeling and petrophysical simulation on three fields, there appear to be areas of unswept oil in channel complexes and downdip oil column potential in several channel sands.

The objectives of the study were first to categorize each completion by fluid type and depositional environment, then to evaluate the production performance for each zone to ascertain differences between good versus poor performance. The study covered only producing fields where reservoir facies are limited to deepwater environments. 3D seismic data was also included with log-based models to identify seismic AVO signatures for a wide variety of fluid, facies and production types.

Research methods relied on traditional reservoir analytical techniques such as decline-curve analysis, nodal and material balance, as well as newer methods that apply well-test theory to monthly production data.

To evaluate efficiencies, the following criteria were used: the original volumes of hydrocarbons-in-place; an expected ultimate recoverable volume; the schedule of recovery; drainage areas; decline rates; plateau periods; elapsed time for water breakthrough; abandonment conditions; and reservoir-drive mechanisms.

'The study provides the level of regional, detailed benchmark information necessary for effective exploration strategies,' said Steve Trammel, senior product manager for new product development, at IHS Energy. 'The ability to access this baseline data at a reasonable cost gives an operator more time to focus on the high-level work required for specific company prospects and projects.'

With production data studied through to November 2003, the report, claimed to be the only comprehensive deepwater US Gulf study combining seismic analysis with production performance methodologies, is designed to assist E&P companies in making informed decisions about production optimization and acquisition/exploration targets in the deepwater operating environment.

- IHS Energy plans to release an update of a related production performance study of the Gulf of Mexico deep shelf in August, providing in-depth analysis of 120 existing fields in water depths less than 1000ft with perforations deeper than 16,000ft.

Production from the shallow, conventional shelf in the northern US Gulf peaked in the 1980s and has since declined, unlike the deep shelf play that achieved close to 30bcf per month of production through last September. Some industry observers have opined that the deep shelf play is within the first 10% of its lifespan, with estimated ultimate recoverable reserves of approximately 10tcf of gas.

MARKET FORECASTS

Pipelines market at full spate

In the second of a series of reports produced exclusively for the *OTC .05 Show Daily*, **Howard Wright** of energy data analysts Infield Systems (**Booth 2340**) says the pipelines market is in rude health.

THE HEALTHY GROWTH IN THE OFFSHORE PIPELINES and umbilical market in the last five years, outside the shallow water Gulf of Mexico, looks set to be sustainable over the next five years.

The next five years look set to be a very interesting time if you work in the offshore oil and gas pipeline industry as transcontinental and inter-regional networks are connected up and offshore Russian oil and gas start to come in from the cold directly to the markets of western Europe and southeast Asia. Not only is the expenditure over the next five years predicted to be higher than that of the previous five, but the make-up of projects is more diverse and the geographical split even more so.

The market for pipelines includes major transportation routes and infrastructure networks and these obviously have an important impact on the future scale of the market. With many grand schemes announced – from North Africa to Europe, Russia to Europe, Russia to Japan and the many various possibilities within the Asian pipeline network – it seems unlikely that they will all gain enough financial backing to be installed within the next five years.

The reasons for the predicted growth in the pipelines and umbilical market arise from a variety of different factors. The forecasts assign the pipeline cost to the year the pipeline is installed and as such this sees 2005 to be an important year with some major projects being laid this year. Three of note are:

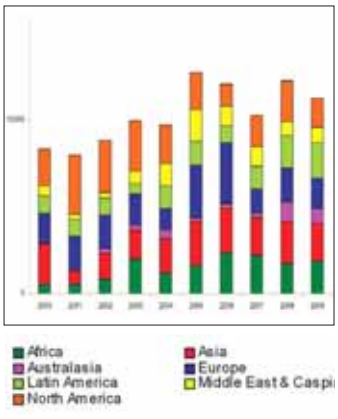
- Snøhvit, which is being laid currently;
- the UK portion of the Langeled pipe which will bring Ormen Lange's gas on the final leg of its 1200km journey from the frozen seabed of the Norwegian Sea to keep the home fires burning in the UK as that country begins to suffer a major drawdown in its domestic supplies;
- the Dolphin project in the Persian Gulf delivering gas over 600km from its origin in the North Field in Qatar to the growing markets in the UAE.

Networking in West Africa is also an important driving factor in the pipeline market. With a ban on flaring in Nigeria the need to monetize associated gas is a pressing one and exporting it west will also aid in fuelling development in its imminent neighbors Ghana, Togo and Benin.

Long subsea-to-shore projects are having a significant impact on the markets. Off Norway, the well documented Snøhvit and Ormen Lange projects are under development. There are also various projects off Egypt that require long tiebacks to shore of the order of 100km or more. In addition to these major projects there are some significant infill projects in already existing field locations in various locations, including recently Brazil.

The next five years will see 24% of pipelines laid in deeper waters. With deepwater lay becoming a key element within the pipeline sector across the globe these projects are no longer just concentrated within the so-called Golden Triangle regions. On the contractor side, there is a persistence of the polarisation between those with global deepwater capabilities and those with a more regional shelf orientation. The costs and risks involved in deepwater are growing and this is likely to see a widening of the gap between the players rather than the reverse.

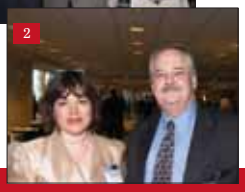
In contrast to the mixed fortunes of contractors over the past few years, we are also seeing some interesting supply and demand imbalances within more technically demanding and challenging projects taking longer and utilizing a greater proportion of available vessels.



Global pipeline and umbilical market by region (US$m) 2000-2009.

Director action

Pictured during Sunday evening's gathering of the OTC Board of Directors are (left to right):
1. OTC .05 chairman Rod Allan, Frank Adamek , Sam Collier and Susan Cunningham;
2. Carolyn Ritchie and Rick Hill;
3. Vice chairman Bill Luyties, Randall Kubota and Peter Kinnear;
4. Tony Jones, Susan Cunningham and Doug Stroud; and
5. Mark Rubin and Alain Labastie.



US indies stay the course

INDEPENDENT OIL AND GAS OPERATORS IN THE US Gulf of Mexico have had a hand in the vast majority of E&P efforts of the past 50 years and intend to remain at the forefront of E&P and innovative applications of new technology.

Independents, it was pointed out at a panel on the opening morning of OTC, hold 90% of the shelf leases issued in the US Gulf between 2000-2004 as well as more than 75% of the deepwater leases. They are active in water depths from a few feet to nearly 10,000ft of water.

The consensus of a group of chief executives of the region's leading independents is that the industry's smaller operators will continue to aggressively seek prospects, either through their own E&P efforts or by farming into blocks held by other companies, including expiring deepwater acreage that may be held by majors but is viewed as low development priority.

Noble Energy chief executive Charles Davidson noted that independents have been involved in 74% of the deepwater discoveries and field developments brought forward between 2000-2004, and have installed 87% of the offshore structures during the same period, up from 76% during 1990-94. Independents accounted for 68% of high bids in the March 2005 Gulf lease sale, he underlined.

Davidson pointed to possible future E&P opportunities, including farm-outs from majors as deepwater leases begin to expire. 'There may be efforts for more farm-outs by majors to bring in other companies, likely independents,' he said. 'Other deepwater leases will roll over and be available for bidding [in future lease sales].'

Dominion E&P senior vice president Tim Parker, while sharing Davidson's optimism, reckons there will be some constraints on future drilling activity. 'With what rigs?' Parker asked. 'All are being used right now, so I don't see much of an increase in [E&P].'

Dominion E&P, meanwhile, is pushing ahead with plans to continue aggressively seeking out conventional prospects as well as becoming a participant in the US Gulf's deep shelf play. The company is a partner on ExxonMobil's Blackbeard prospect permitted to 32,000ft.

'Deep shelf [prospects] extends deeper than was believed possible a few years ago,' Parker said. He added that his company would continue to invest some $400 million annually 'as long as good prospects were available'.

Noble Energy CEO Chuck Davidson.

OTC .05 SHOW DAILY

Help us to help you

OTC exhibitors with news items to be considered for the Show Daily are invited to drop them off at the Offshore Engineer display (**Booth 1501**).

Fugro/SUT back marine technology scholarships

FUGRO GEOS HAS ANNOUNCED ITS SUPPORT OF marine science, engineering and underwater technology education by offering a $5000 scholarship to an undergraduate student pursuing a course of studies one of the related fields. The Society for Underwater Technology's Houston Chapter (SUT Houston) will manage and assess applications in conjunction with Fugro GEOS.

SUT Houston awarded three $5000 scholarships to qualifying undergraduates last year. In addition to the SUT and Fugro GEOS awards for undergraduates, SUT Houston will also be awarding a $10,000 scholarship for graduate students this year, bringing the total to five awards worth $30,000.

Students of any nationality in full-time study at any accredited US college or university are eligible. Applicants are welcomed from the fields of marine science, technology and engineering or mainline science and engineering courses where students can demonstrate an interest in pursuing a career in the marine field or a marine application for their studies. Undergraduate students must have completed at least one year of full-time study.

● Scholarship details: www.SUTHouston.com

Deepwater's missing link

NEW FROM CRAIG GROUP INTERNATIONAL MOORING Systems (IMS) this week is a product the specialists in the sale and rental of mooring systems believe will open up new markets in ultra-deepwater developments around the world. The product, a connector dubbed the H-Link and developed by Mark Prentice (pictured) who recently joined the Craig Group subsidiary as technical manager, has already helped IMS to land two contracts worth over $2 million in the Gulf of Mexico.

In areas of deepwater, lengths of chain and mooring lines need to be attached together to give enough length to anchor floating production units and semisubmersible rigs to the seabed. The lines are usually held together by chain but abrasion can cause deterioration, reducing the line's life expectancy. The H-Link, for which Prentice holds the intellectual property rights, is designed to securely connect chain and polyester mooring lines together.

Under the new contracts, IMS will deliver 81 H-Links to Atlantia Offshore for installation on the Independence Hub semi and 44 H-Links to InterMoor for use on ATPs Rowan Midland semi-submersible.

Von Flatern's view

IN THE MINDS OF MANY OTHERWISE INTELLIGENT people, the oil industry is a cabal of greedy, well-connected 'good ol' boys'. Despite the millions of dollars spent on television and print ads extolling the industry's love of cuddly animals, contributions to local economies and unmatched support of worthy causes, the perception persists.

Now, as gas and crude oil prices hover at record levels, the industry's role as favorite whipping boy has been re-invigorated by politicos and NGOs wishing to deflect from themselves blame for anything from war in the Middle East to the failure of the Chicago Cubs to win a World Series.

Assuming it is worth one more attempt (an assumption not universally held), the industry might try winning the hearts and minds of its critics by inviting them to attend a few OTC technical sessions, maybe knock around the exhibition hall some and even attend a post-conference party or two. Since telling them the industry is not a monolithic cult bent on world domination hasn't worked, maybe showing them will.

After all, it would require an inordinate level of close-mindedness for anyone listening to a few typical OTC papers on technologically as advanced and complex as any produced by NASA to imagine the industry to be populated by ignorant, environmentally-insensitive yahoos.

Likewise, a day or two around the conference should serve to show outsiders that the popular image of cigar-chomping, loudmouth oilmen in cowboy hats has long been replaced by thoughtful, urbane academics and scientists (albeit occasionally dressed in cowboy chic). Indeed, in 2005, one is as likely to encounter as many dashikis and kilts as cowboy hats at an OTC event.

To confound those who insist the oil industry exists to exploit the wealth of poor nations for the benefit of the rich ones, there is the language of OTC. While true that most presentations are delivered in English, it is English colored by accents from every corner of the globe as people whose first tongue is Farsi, Norwegian, Chinese, Arab, French and dozens of other languages and dialects, explain how they leveraged the latest industry innovations to solve a particularly thorny offshore exploration, drilling or production challenge off their shores.

The offshore oil industry has mostly given up answering its critics since experience shows arguments in its own defense go largely ignored. But at least by that most hallowed of liberal yardsticks, 'cultural diversity', OTC seems to make a point even its most ardent foe must concede.

● **Rick von Flatern** is the US editor of *Offshore Engineer.*

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