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Welcome

With the IADC hosting their International Well Control Conference in Abu Dhabi in November, this edition of the O&G Review has a focus on our Middle East Customers. The increased drilling activity in the region, particularly in Saudi Arabia, has seen a greater demand for our DrillsIM range of Drilling and Well Control simulators, as well as the Pipe-Handling simulators.

Although some Operators and Drilling Contractors have been "on-board" with simulation technology for several years, others are now only waking up to the benefits. The

relevant rig specific simulator (operators chair, comprehensive 3D visual world, emulated HMI control system, the DrillsIM downhole model) and a well structured training programme will deliver rig specific results. Learn more about the DrillsIM-6000/600s on the centre pages.

Whilst we always value repeat business (we must be doing something right!), we also appreciate being awarded contracts and we welcome the following **new** customers:- (in alphabetical order) Daryan for Petroleum Consultations & Services Co., Gesco Group, Intex, Parker Drilling, Petrom/OMV, Qatar International Safety Centre, Saudi Aramco, Thule Drilling, The University of Texas at Austin, Well Control Schools and the Yemeni Ministry of Oil . We look forward to working with and supporting these companies in the months and years ahead.



In addition to exhibiting at the various IADC Conferences held throughout the year, Drilling Systems is active in attending the quarterly IADC Well Control Committee Meetings, demonstrating our commitment to continuous improvement in meeting Industry training needs. Currently, we are providing technical input with respect to our CTS range of Coiled Tubing Simulators and the proposed new WellCAP curriculum for CT accreditation.

Finally, after many years, we now have a new look website, with much more up-to-date information on our products and services. Please take a moment to revisit www.drillingsystems.com

Clive Battsby, Operations Director

Middle East "Well Controlled" by DrillsIM




DRILL.sim In the fourteen years since the DrillsIM range of drilling and well control simulators were launched, fifteen DrillsIMs have been delivered to our Middle East Customers alone. As aggressive drilling campaigns kick off, the next six months will see a further nine units being shipped directly to the region, or to centralised training centres supporting rigs operating in the area. Two of these units will comprise the DrillsIM-600 Mechanised Rig and Pipe-Handling Simulators supporting Drilling Contractor contracts with Saudi Aramco, whilst **Saudi Aramco** themselves have just ordered a DrillsIM-5000 for Dhahran.



Whilst the DrillsIM range covers the well control aspects for rotary drilling , the CTS range of Coiled Tubing Simulators provides the well control training capabilities for continuous pipe operations.

Based on the field-seasoned and industry accepted CTS-5000 Full Size simulator, Drilling Systems has launched the CTS-50 Mini-Portable CT Simulator. The simulator will support new accreditation standards currently being set out by the Industry.

The DrillsIM-5000 installed at The Petroleum Institute in Abu Dhabi.

- Bahrain** 
- Iran** 
- Iraq** 
- Kuwait** 
- Oman** 
- Qatar** 
- Saudi Arabia** 
- UAE** 

Compact Solution for Rig Specific Pipe-Handling Training

DRILL^{SIM} 600

The multi-functional DrillsIM-600, provides a transportable solution for pipe-handling, drilling, well control and for crane operator training. The DrillsIM-600 is supplied in either a "fixed" two screen or a "rotating" three screen configuration. Each individual installation (land rig, jackup, semi, platform, drillship etc) is modelled in a geometrically precise 3D visual world, allowing the drill crews full control of the drilling package. By using "plug and play" panniers, multiple installations can be modelled on a single simulator, increasing the return on investment for our customers.



The Human Machine Interface (HMI) Control Systems from the major equipment vendors have been emulated to ensure the trainees learn the correct operating procedures for their particular rig, instead of learning a single generic process. The inclusion of the DrillsIM Downhole Model and Instructor Station Software completes the package, creating the most advanced training solution for mechanised rigs available in the market today.

The DrillsIM-600 in "vertical" mode for offshore pedestal crane operator training

The main capabilities of the DrillsIM-600 include :-

- Rig Crew Training:** Surface Equipment; Tubular handling (Riser, Drillpipe, HWDP and Casing); HMI Operations; Downhole Reactions; Verification / Fine Tuning of Rig Operating Procedures
- Routine Well Programmes:** Emergency response scenarios; Graduate Drilling Engineers
- Advance Well Programmes:** with complete onshore/offshore teams; Drill the well on the simulator (DWOS) ahead of a live complex well; Practice and Mitigate operational risks
- Additional Courses:** IADC WellCAP and IWCF Accreditation; WellCAP Plus; Stuckpipe, Wellbore Cleaning Problems, Extended Reach Drilling (ERD), Through Tubing Rotary Drilling (TTRD), and Managed Pressure Drilling (MPD)

Claus Chur, Director - Europe, Middle East & Russia, KCA DEUTAG, and IADC's 2006 Chairman at the controls of a DrillsIM-600.



In follow-up to the announcement in the Spring 2006 O&G Review, the DrillsIM-600 ordered for **TNK-BP** has been delivered to the Tyumen office in Russia. The simulator (below), operated by **DART**, models the Bentec HR-5000 Land Rig and emulates the InfoVIEW HMI Control System. The two main LCD screens can either display one large rig floor panorama across the screens, or can display the drillfloor on one screen and a view inside the derrick on the other.

STOP PRESS NEWS

In October 2006, the **Parker Drilling Training Center** in New Iberia, LA, USA and **Thule Drilling ASA** in Norway ordered DrillsIM-600 simulators for their respective Operations.

By using plug and play panniers, the Parker Drilling simulator will model the Orlan Platform (Sakhalin I) as well as their new Bomco and Kuri land rigs that are under construction.

The Thule Drilling DrillsIM-600 will model the Thule Power jackup, currently under reconstruction in Sharjah, UAE.

The simulators will be delivered in 2007.



40ft Container Heading East to Sakhalin

As reported in the Spring 2006 O&G Review, Drilling Systems had been awarded the contract to supply a DrillsIM-6000 Container for Sakhalin Island. The 40ft container containing the DrillsIM-6000 Pipe-Handling, Drilling and Well Control Simulator has now been manufactured and shipped to Yuzhno.

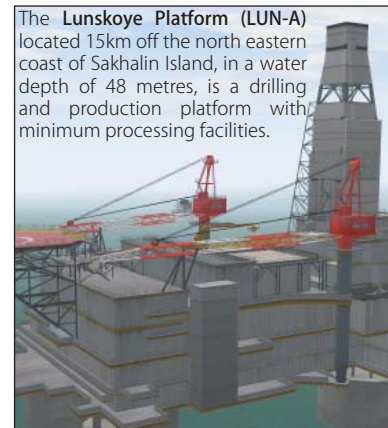
The simulator has been developed for **KCA DEUTAG**, the Drilling Contractor on the Lunskeye A platform operated by **Sakhalin Energy Investment Company Ltd. (SEIC)**, the Shell-led operating company for the Sakhalin II Production-Sharing Agreement.

DRILLSIM 6000 Pipe-Handling, Drilling and Well Control

A Design Challenge

The final destination of the simulator brought its own challenges to the Design and Production teams. To accommodate the diverse temperatures found on Sakhalin Island throughout the year, the containerised simulator needs to operate between -40 deg C and +35 deg C.

Included within the final solution is a fully self-contained heating and air-conditioning system that is also capable of de-humidification and humidification. All windows, doors and emergency exits are heat-traced, ensuring they can be opened in all climatic conditions. Although destined for operation within Sakhalin Island, the simulator is designed to operate throughout the world and supports 400/415v and 460/480v three-phase power at 50/60 Hz, allowing use at the shipyard or the wellsite.



The **Lunskeye Platform (LUN-A)** located 15km off the north eastern coast of Sakhalin Island, in a water depth of 48 metres, is a drilling and production platform with minimum processing facilities.



DrillsIM-6000's **Virtual Reality World**

Lun-A's **real world**

DrillsIMs around the globe

During the summer, two DrillsIM-50s were accepted and shipped to Cairo for **International Expertise Association (INTEX)** and **The Gesco Group**, whilst in October, the Company received a purchase order from **Qatar International Safety Centre** in Doha, who will be the recipient of our 42nd DrillsIM-50.

In close succession to the nine DrillsIM-20 simulators delivered to Diamond Offshore in Houston earlier this year, four DrillsIM-20s are heading to the **University of Texas at Austin**, USA. As with the Diamond deal, a pentium notebook pre-installed with the DrillsIM-5 Instructor Software will allow a Lecturer to remotely connect to each DrillsIM-20, to monitor student performance and where necessary, introduce a range of malfunctions to challenge the most competent students!



Well Control School (WCS) facility in Oman will shortly receive three DrillsIM-20s, in support of their expanding business. Due to customer demands in the Middle East for more complex simulation training (particularly in the area of volumetric well control and stripping operations) the DrillsIM-20s, with their advanced capabilities, will replace some existing simulators that will be returned to the WCS fleet in the USA. Ed Geissler, the recently appointed President of WCS commented "With Drilling Systems' close proximity to the Middle East market, the DrillsIM-20 technical capabilities and the Company's long standing support of the IADC WellCAP schemes, WCS is delighted to be using the Drilling Systems equipment for the first time".

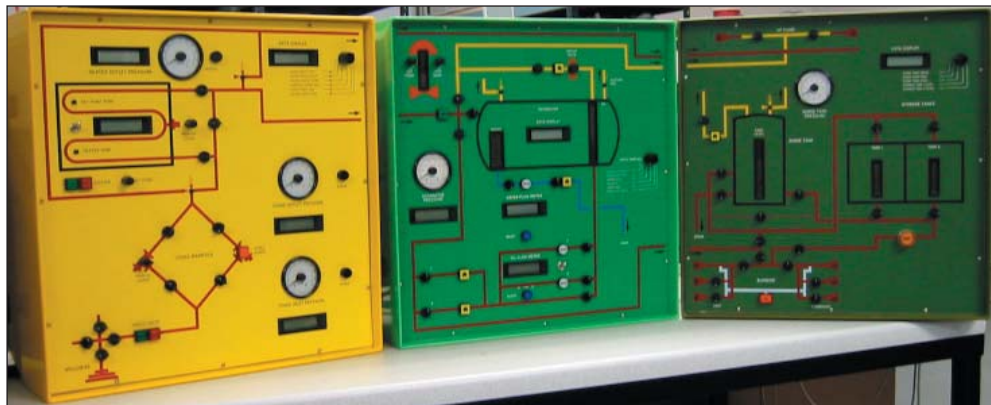
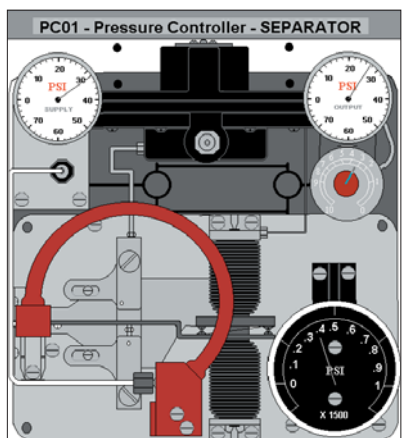
In Q1 2007, a DrillsIM-5000 will be installed for **Petrom** (a member of the **OMV Group**) at the University of Ploiesti in Romania. In addition to the base supply, the simulator will also include the following options :- Motion Compensator, Deepwater Subsea BOP, Subsea Diverter, Kill Line Monitor, 9-5/8" Cement Head, Wellhead, Workover Manifold and Workover Pumps Console. In addition, the PC-based Drilling Operations Trainer (DOT) and Drilling Management Trainer (DMT) applications are being supplied to compliment the training programmes.

Surface "Flow-Loop" Testing in Yemen

The TestSIM-500 "super-portable" provides a system of hardware and software systems which allow well test procedures to be learned and validated by a wide range of associated personnel. Besides providing introductory training suitable for new recruits, TestSIM-500 is able to test the knowledge and capabilities of experienced well testing personnel.

Through an EU funded project, the **Republic Of Yemen, Ministry Of Technical Education And Vocational Training** has purchased a TestSIM-500 and a five-user licence of the TestSIM-5, PC-based software. The simulator will be delivered to the Institute in Mukallah and training is scheduled to start in November 2006.

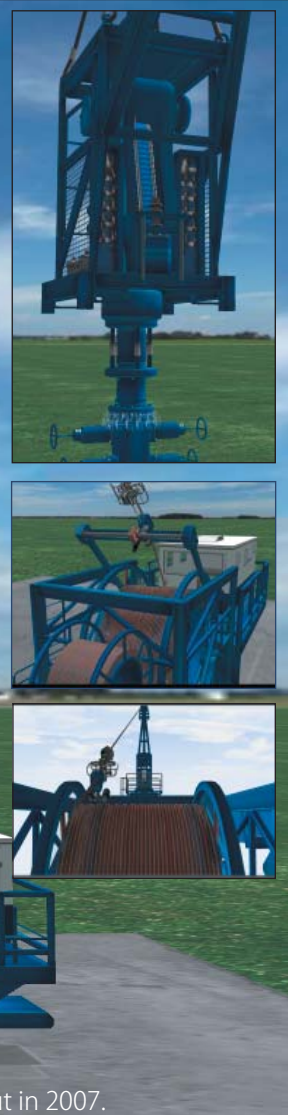
TEST SIM 500



Technical News

Since 1998, Drilling Systems have been developing 3D visual worlds for the high-end DrillsIM-6000/600 range of pipe-handling simulators. During this time, graphics technology has improved whilst computing power has tumbled in price.

As a result, Drilling Systems is able to deploy this technology across some of their other simulators, the first of which will be the CTS range of Coiled Tubing Simulators. The new CTS graphics are nearing completion and will be implemented in due course.



The new graphics for the CemSIM range of Cementing Simulators will be rolled out in 2007.

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