

# Gripping News



*A regular quarterly newsletter  
Informing and Entertaining !*

*Issue 7, December 2008*

It has been a momentous last few months of the year for Bardex with senior management changes and a new headquarters address.

Mr. J. L. Bartlett Jr. our company's President for over 30 years and principal owner has retired from actively running the company and effective 2<sup>nd</sup> October, Mr. Dennis Graney was appointed President in his place. Dennis has now relocated his home from Houston to Goleta. Mr. Bartlett will stay in contact with Bardex in his position as Chairman of the Board of Directors.

Bardex is growing and in the last few months we have appointed several new engineers to provide us additional capabilities in design and project engineering and so in early November, we moved our offices from 6300 Lindmar Drive to 6338 Lindmar Drive. No. 6338 has always been our manufacturing plant's address, so now not only do we have a better and more spacious office layout, but as a further bonus, the offices adjoin the manufacturing plant.

2008 has been a good year for Bardex: our financial performance has again been very good and we face the uncertainties of 2009 and beyond with no long term debt and stronger than ever before: order intake of new systems, engineering, field service and spare parts has been near record highs and we have a good carry-forward to keep us busy next year too.

**Stop Press:** *We have just signed a major contract to design, manufacture and supply a mooring system for use on an FPSO destined for operation off the west coast of Africa.*

## 2008 Exhibitions



Our Brazilian agent, Gaia, exhibited at the Rio Oil & Gas Expo held 15-18 September. Art Langlois was at hand to discuss Bardex equipment for the many offshore projects in the planning stages. Over 34,000 people visited the event.

## Visit Bardex at these Exhibitions in 2009



The next MCEEDD will be held in Copenhagen, Denmark's capital city, 31 March – 2 April. See Bardex on Stand 531.



OTC is the main global offshore oil/gas industry event and will take place at The Reliant Park in Houston starting Monday, 4 - 7 May. Bardex will have representatives manning its booth from Sales/Marketing, Engineering and Service Support Departments to discuss systems/equipment and answer your queries.



Aberdeen, Scotland's "granite city", is the venue for Offshore Europe which is specifically aimed at the upstream industry

## Prirazlomnoe Field Development:



Bardex has recently signed a contract with Russia's largest shipyard, JSC PO Sevmash, for design, manufacture and supply of a rig skidding system for use on the Prirazlomnaya offshore ice-resistant fixed platform located in the eastern Barents Sea (Pechora Bay) and to be operated by Sevmorneftegaz, a wholly owned subsidiary of Gazprom. The graphic shows an artist's impression of the platform in operation during winter.

The skidding system is designed for operation in the extreme cold of the northern Russian winter at ambient temperatures down to -40 degrees. Two hydraulic gripper jacks rated over 600 tonnes capacity will skid the

main support frame (skid base) and a further two hydraulic gripper jacks rated over 300 tonnes capacity will skid the drilling substructure. Bardex will supply a hydraulic power unit comprising two 30 kW electric motors coupled to four pumps, heat exchanger and 400 litre reservoir. The HPU is instrumented and has an integrated skidding control panel.

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## Bardex Systems for Extreme Cold

We have been designing and manufacturing gripper jacks and associated systems/equipment for low temperature operation for many years and have gained considerable experience in this specialised area. When the temperature reduces, the ductility of steel also reduces. Ductility is an indicator of how a steel resists impact forces and this is normally measured, qualitatively, by Charpy testing. A second much more expensive, but quantified measure may be obtained by CTOD testing. "Ordinary" carbon steels can be used for operating in ambient temperatures down to 0°C but as the temperature drops below freezing, special steels and even changed manufacturing processes must be selected to ensure continuing safe, reliable and dependable operation.



Drilling systems equipment such as gripper jacks and seismic restraints are subjected to the full rigours of the environment since they always operate in an exposed location, in an unheated part of the drilling rig or sub-structure. Many of the more than 70 systems that Bardex installed in Northern European waters are designed to operate at down to -20°C, as is Hibernia off the coast of Newfoundland, and many have been in operation for in excess of 20 years. Similarly, in the 1980's, Bardex supplied rig skidding systems to Marathon, Mobil and Shell for operation in the extreme cold of Alaska.

More recently, Bardex supplied systems to Sakhalin I (Orlan) and Sakhalin II (Lunskoye and Piltun) for operation down to -40°C and for the Prirazlomnaya platform, Russian regulations require us to take into account in our design for potential temperatures of as low as -45°C. In these orders we select special quenched and tempered alloy steels for the major stressed gripper parts and spun alloy steel castings for the jacking cylinder tubes since, although they cost more, it is the material composition and steel manufacturing processes that provide the proper microstructure of the steel to give the Charpy values needed. Bardex extreme-cold seismic restraints are similarly manufactured using Charpy-tested Q&T steels or CTOD tested special steel alloy castings.

In spite of short-term fluctuations, the long-term trend is increasing price of oil and gas and because existing oil/gas fields are depleting, there is an on-going search for new fields. Together these pressures, in conjunction with improved technology, mean that new frontiers such as deepwater and extreme cold environments are being explored. The phenomenon of global warming is causing the glaciers and ice-sheet of the Arctic to melt and it is thought by many that there is immense hydrocarbon wealth to be tapped as the Arctic seas become accessible. With the knowledge and experience gained from many years of exposure of our drilling systems to harsh, extreme low temperatures, when the need arises, Bardex has the ability to transfer this technology to its mooring tensioning systems for use in floating drilling and production systems.



Bardex is, and will stay, in the forefront of this technology.

(Photos on this page are by courtesy of Sakhalin Energy Investment Ltd., Hibernia Management and Development Company Ltd. and Shell International Ltd)

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For past issues of *Gripping News* please look under "news" on our website at [www.bardex.com](http://www.bardex.com)

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