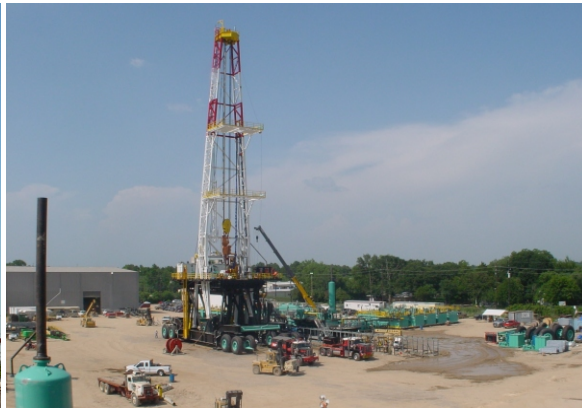


THE ULTIMATE INTEGRATED DRILLING CONTROL



Email : information@rigserv.com



Website: www.rigserv.com

RIGSERV INTERNATIONAL

RIGSERV INTEGRATED DRILLING CONTROL



Rigserv Integrated Drilling Controls in a driller's cabin allow the driller to control the drawworks, top-drive, iron-roughneck, pipe packer, AC drive, and drilling instrumentation system from an ergonomically designed driller's chair & console.

Rigserv integrated drilling controls system on **the world's most advanced land rig**. It is operating in a desert environment with a day time temperature of 55°C.



Rigserv Integrated Control System can be operated by drillers without any costly simulation training for drilling automation. It has been successfully replacing conventional drilling controls for more than 4 years.



Rigserv Integrated Drilling Control System on **the world's largest jack-up rig**. The rigs are designed for all weather world-wide drilling environment.



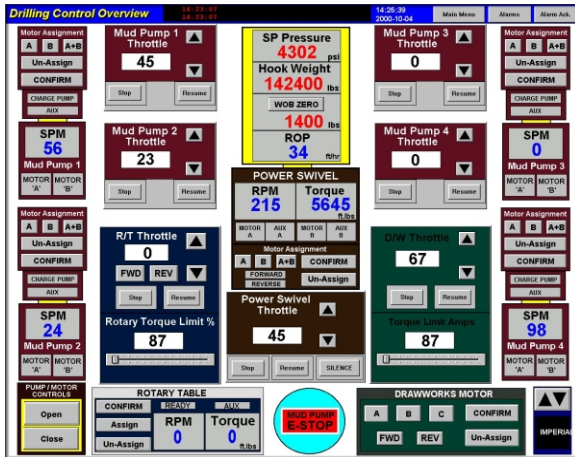
RIGSERV INTEGRATED DRILLING CONTROL



RIGSERV INTEGRATED DRILLING CONTROL

The Driller controls the drilling operation from the chair and console for:

- Complete drawworks function with anti-collision protection.
- Topdrive control.
- Rotary-Table control.
- Elevator control.



RIGSERV INTEGRATED DRILLING CONTROL

Includes a touchscreen control, drilling SCADA System, providing full control function, instrumentation, monitoring and alarm functions of all drilling machinery within a single durable panel.

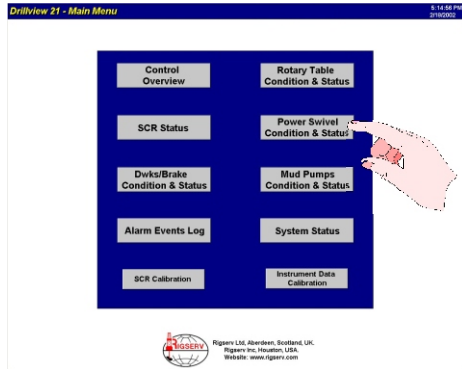
AN INTEGRATED DRILLING INSTRUMENTATION

To monitor the drilling & Mud functions. It replaces ALL the conventional instrument panels and gauges including the mechanical Hydraulic Weight indicator.

Intelligent and multi-functional, displaying the appropriate data automatically during the drilling or tripping operations.

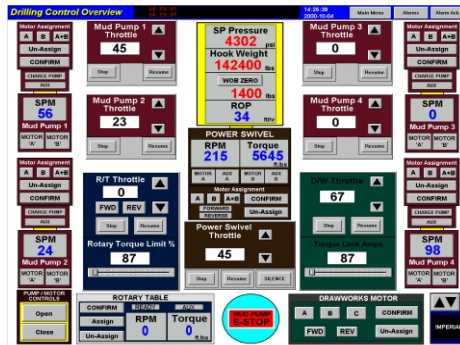


RIGSERV INTEGRATED DRILLING CONTROL



MENU DRIVEN TOUCH SCREEN FOR:

- SCR/AC Drive Control
- Power Swivel / Top Drive Control
- Zone Management Control
- Condition Monitoring of Machinery
- Preset and Adjustable Limits
- Fully Expandable For Future Need

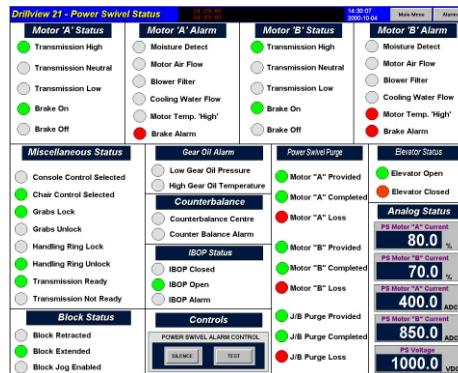


CONTROL OVERVIEW:

This is the control screen during normal operations. The driller can control all the drilling machinery with a touch of a finger.

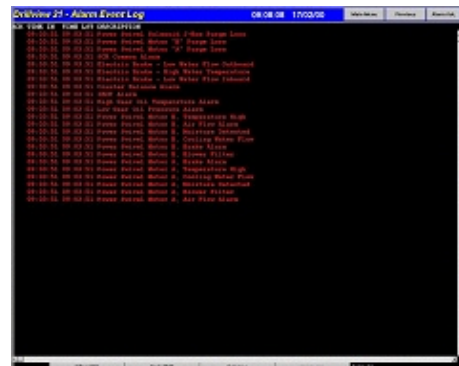
DRILLING MACHINERY SETTING:

The operating conditions and setting of all drilling machinery can be displayed and controlled from this screen.

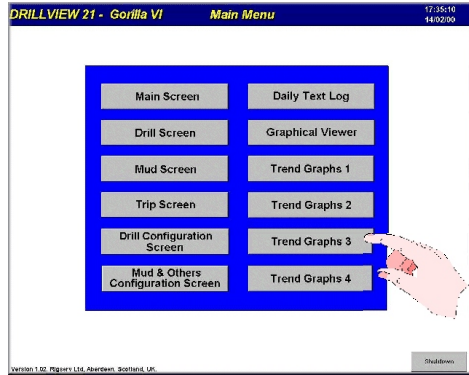


ALARM MONITORING & LOGS:

Any abnormality in the drilling machinery or on the drilling rig concerning the driller will be annunciated and logged.



RIGSERV INTEGRATED DRILLING CONTROL



One Attractive **Color LCD Panel** will display:

- Drilling Instrumentation Panel
- Mud Instrumentation Panel
- Tripping Instrumentation Panel
- Drilling Data Monitor
- Drilling Recorder
- Calibration / Configuration Panel

BY THE TOUCH OF A FINGER

The “Drillview 21” is a **Drilling Data Monitor**:

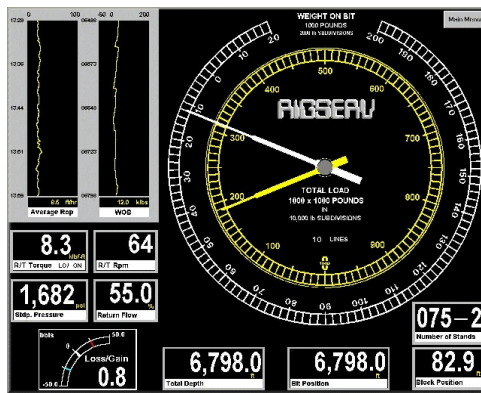
Displays related to Drilling & Mud Information on One Screen

Provides an Accurate, overall view of the Operations.

Shows Trend and Interaction Data.

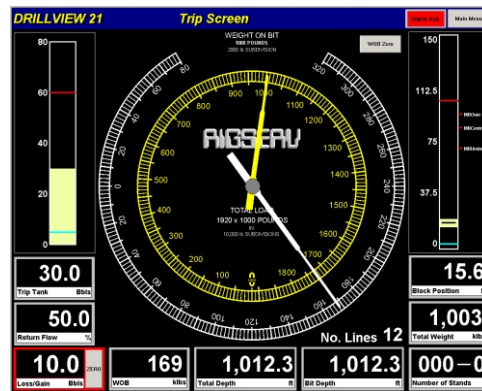
Displays MWD and Directional Data.

Custom



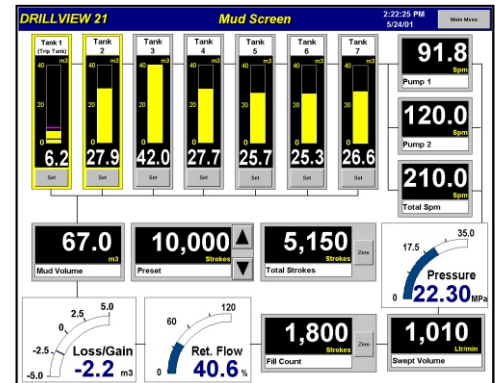
“Drillview 21” **Displays Tripping Information:** (Manually or Automatically)

- Drill Depth & Bit Position
- Number of Stands & Singles
- Trip Tank Volume & Level
- Fill Count & Fill Volume
- Flow Return & Gain / Loss
- Crown & Floor Protection
- Kick/Flow protection

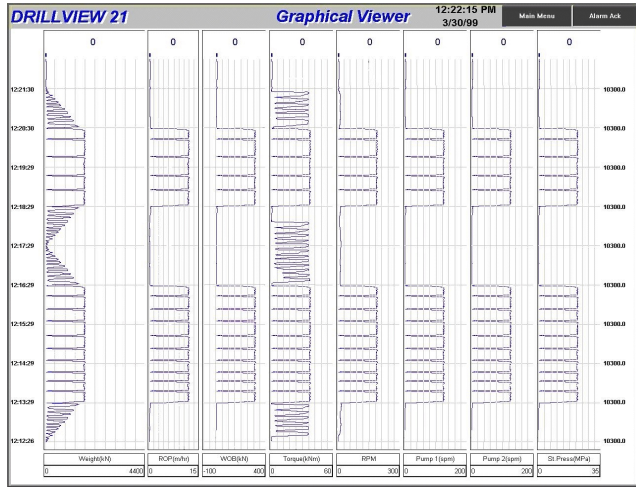


“Drillview 21” **Displays Mud Information:**

- Mud Volume, Gain / Loss & Flow
- Pump Speed, Stroke, Pressure & Discharge
- Tank Volume & Trip Tank Gauging, Alarm, etc.



RIGSERV INTEGRATED DRILLING CONTROL



“Drillview 21” is a **Drilling Data Recorder:**

Graphically Displays selected drilling parameters.

Time based, depth based or event based
Paperless recorder

Displays information on MWD or directional drilling activities

Kick prediction

Archiving

“Drillview 21” is a Driller’s Alarm Annunciation and Calibration Panel:

High / Low alarm setting and display of all alarm conditions

On-Screen calibration - simplifies set-up

Customized configuration of display format - Password Protected

RIGSERV INTEGRATED DRILLING CONTROL



Rigserv built the very first Integrated Driller's Control Cabin, with remote brake handle and "wrap-around" console back in 1985; Rigserv has built the most integrated drilling control cabins with sophisticated controls than anyone else. With 25 years of knowledge and experience we provide personal, reliable, turnkey service to our customers.

Rigserv is an independent drilling control and automation designer. We represent the interests of the rig owner by designing, engineering or modifying the drilling controls into a single purpose module. The result is a state-of-the art, completely coordinated Drilling Control Center for any and all customer equipment.

Rigserv's Automated Drilling Control Cabin, can be equipped with:

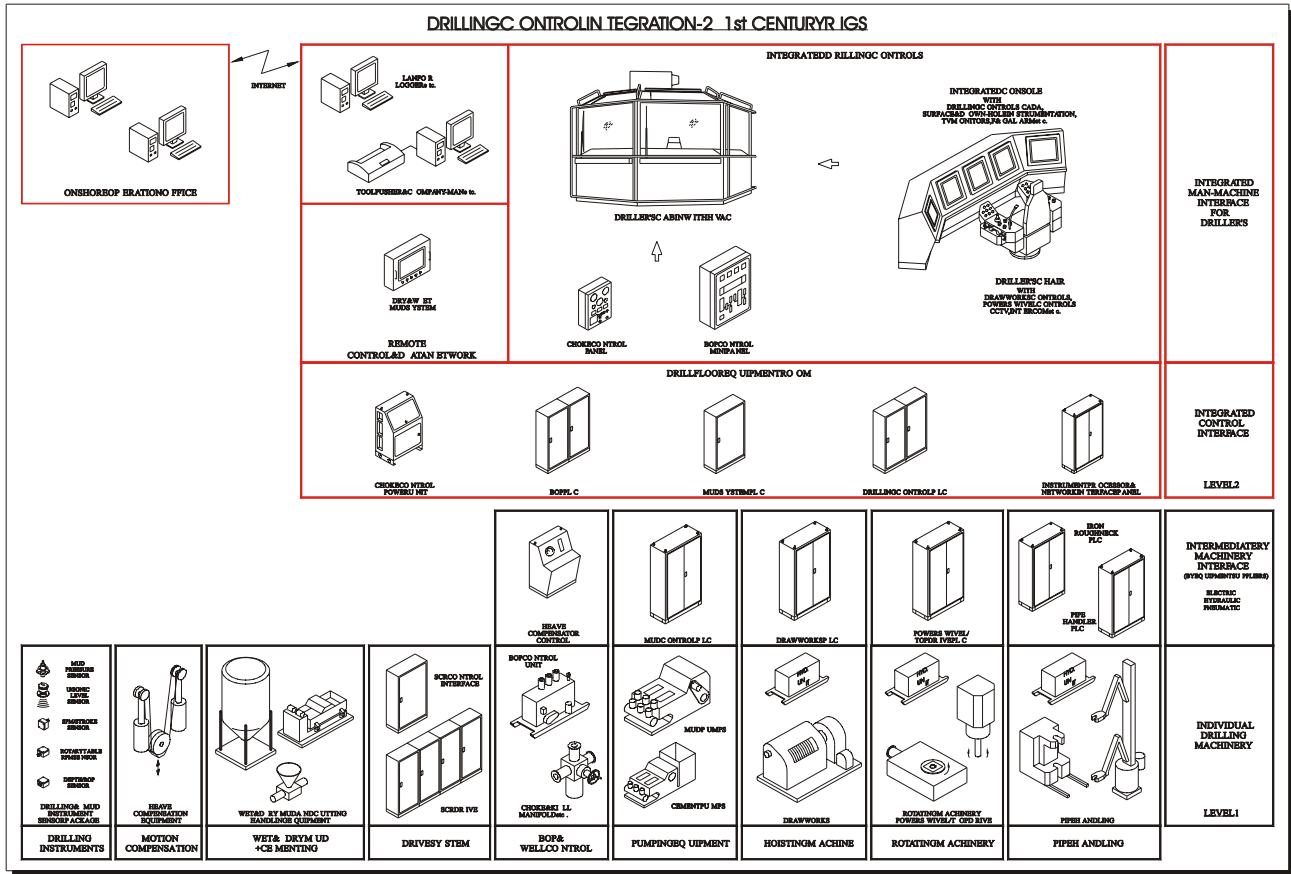
- Touchscreen automated drilling control panel
- Topdrive / Power Swivel controls
- Pipe handling machine controls
- Alarm annunciator
- BOP / Diverter control panel
- Heave compensation control

- Drilling instrument panel
- Drawworks controls
- CCTV system
- Driller's control chair
- Choke control panel
- Zone Management

With highest quality at the most competitive price.



RIGSERV INTEGRATED DRILLING CONTROL



DRAWING NO. 10162438-1

RIGSERV is an independent organization, started 25 years ago during the North-Sea oil development, specializing in the INNOVATION of Drilling Instrumentation and Drilling Automation.

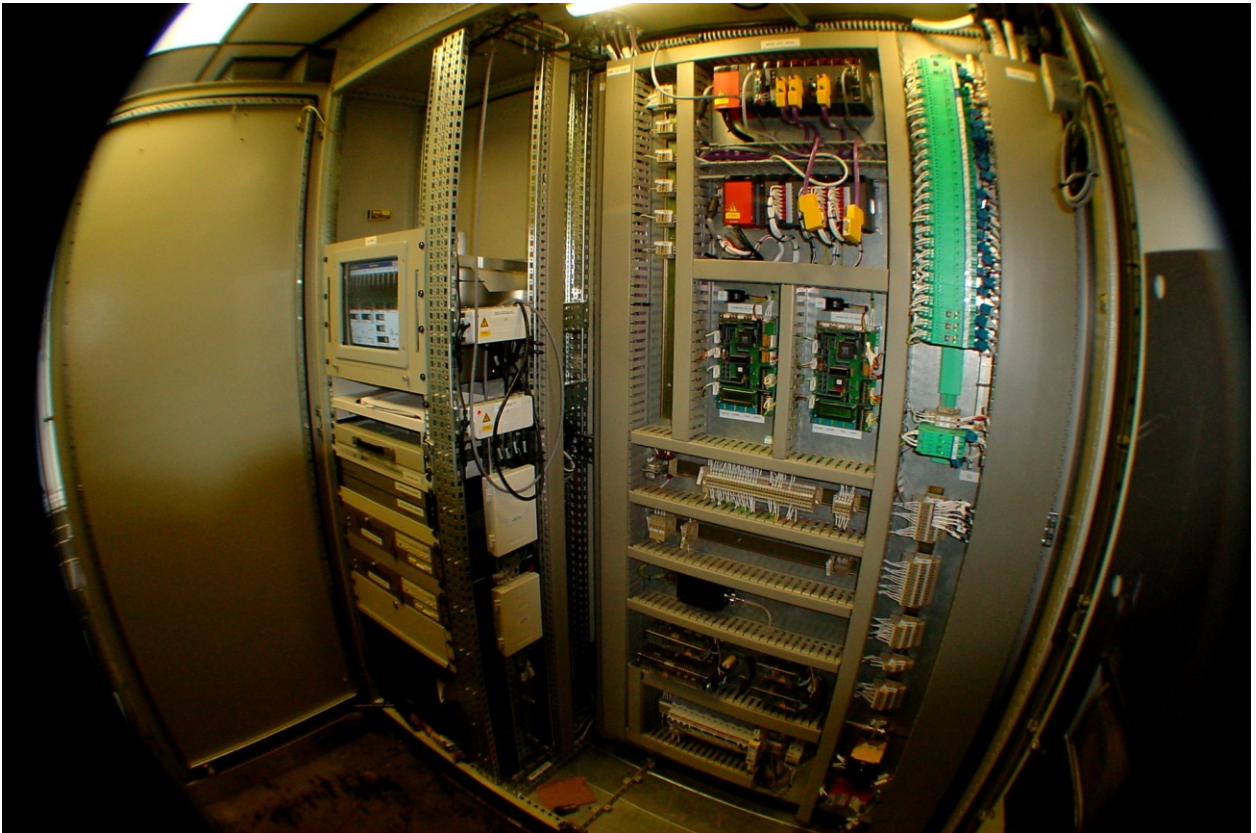
Specializing in Integrated Drilling Controls and independent from any oilfield equipment supply organization, we can most effectively assist the user, empowering them with **A FREEDOM OF CHOICE** to select the best equipment and price for the job without compromise.

RIGSERV Company has the ability and willingness to work with ANY Drilling Equipment Supplier. This benefit has been proven on the Rowan's Gorilla 5,6,7 & 8 projects, which demonstrate the best combination of equipment with no time loss during construction, commissioning and operation.

RIGSERV provides a platform for the Rig Owners and Rig Operators to operate the Rig in a higher level. **Rigserv provides Management Tools for the Drilling Industry today and into the FUTURE.**

RIGSERV INTEGRATED DRILLING CONTROL

One Of The Most Outstanding Features Of
Rigserv's Integrated Drilling Control System
Is its Ability To
Interface With Drilling Machinery From **Any** Manufacturer.



The customer can select the best equipment from any combination of manufacturer's and Rigserv will integrate them without any technical difficulty. By doing so, the customer can have the freedom of choice to get the best equipment for their requirements.

Rigserv offers cutting edge technology in the best oilfield tradition. For the last 25 years our customers have relied on us to find the best technology, save them money, provide timely delivery and a hassle free commissioning.

We have equipment in the field still providing continuous and trouble-free service for over 20 years.

RIGSERV INTEGRATED DRILLING CONTROL

**RIGSERV'S LEADERSHIP
IN DRILLING CONTROL & INSTRUMENTATION**



RIGSERV'S LATEST INTEGRATED DRILLING CONTROL SYSTEM ON THE WORLD'S MOST ADVANCED US \$ 32 MILLION LAND RIGS FOR NDC.

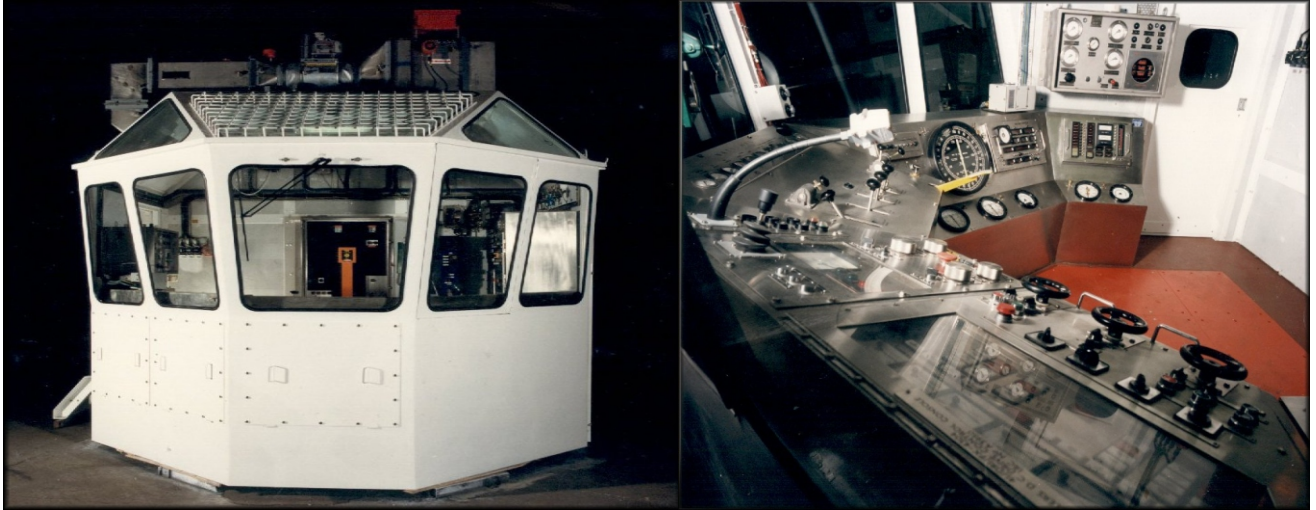


RIGSERV'S TOUCHSCREEN DRILLING CONTROL & INSTRUMENTATION SYSTEMS ON THE WORLD'S LARGEST JACKUP RIGS ROWAN GORILLA 5, 6, 7 & 8 COSTING SOME \$200 MILLION TO BUILD IN 1998/1999/2000/2002.



RIGSERV'S TOTALLY INTEGRATED DRILLING CONTROL CABINS ON THE WORLD'S LARGEST OFFSHORE CONSTRUCTION, THE \$5 BILLION HIBERNIA DEVELOPMENT PROJECT IN EASTERN CANADA IN 1995.

RIGSERV INTEGRATED DRILLING CONTROL



RIGSERV'S FIRST INTEGRATED DRILLING CONTROL IN A CABIN ON THE NORTHSEA US\$ 5 BILLION "TOTAL NORTH ALWYN" PROJECT IN 1986.

RIGSERV EQUIPMENT WORLDWIDE



RIGSERV; FIRST IN THE WORLD TO INTRODUCE MICROPROCESSORS TO INTEGRATE DRILLING INSTRUMENTS AND NON-CONTACTING SENSORS IN 1977.

RIGSERV; FIRST IN THE WORLD TO INTRODUCE TOUCHSCREEN CONTROL DISPLAYS, MULTI TASKING DRILLING CONTROLS AND INSTRUMENTATION PANELS IN 1998.

4th July 1996

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Fax 0171 580 6345



TO WHOM IT MAY CONCERN

Rig Design Services Ltd

RE: RIGSERV LIMITED ABERDEEN UK

Rig Design Services Limited (RDS) has purchased Drilling Instrumentation Systems and fully equipped Drillers Control Cabins from Rigserv for eight offshore projects. The most recent order was for two fully integrated Driller's Control Cabins for the Hibernia platform, offshore eastern Canada, on behalf of the Hibernia Management Development Co. Rigserv supplied the Cabins and the Drilling Instrumentation systems and also integrated all controls and instrumentation for the other drilling systems into their Cabins.

Throughout this and previous projects, Rigserv have displayed a high technical capability with the state of the art technologies required for this equipment, an acute technical and commercial awareness of the needs of the customer and an accommodating, non-adversarial contractual attitude.

RDS and our clients (Shell, BP, Amoco, Elf, Total, Marathon and HMDC) have been completely satisfied with the equipment which has always been delivered on time.

Consequently, based on our experience, we have no hesitation in recommending Rigserv as suppliers of Drilling Instrumentation and associated Systems and are confident that they will give similar satisfaction to all of their customers.

Yours faithfully
For and on behalf of
RIG DESIGN SERVICES LIMITED

G. Jackson
Director

For the latest reference, please contact:

Rowan Companies Inc.,
Project Manager for
Gorilla 5, 6, 7 & 8
Mr. Robert Rintlinger
Tel: 903 237 7546

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