

# PACEM<sup>®</sup> 1000

**Designed specifically to meet Saudi Aramco's requirement for gas and oil drilling; with built-in capabilities to continue to push the boundaries of drilling performance.**





*The latest in  
Nabors' successful  
PACE<sup>®</sup> rig series, ...*

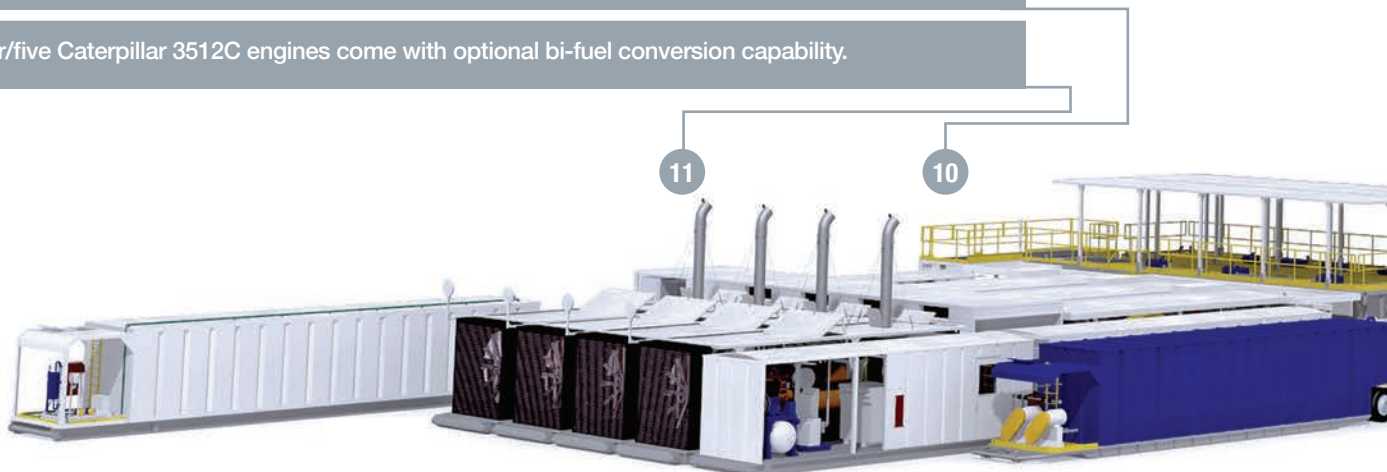


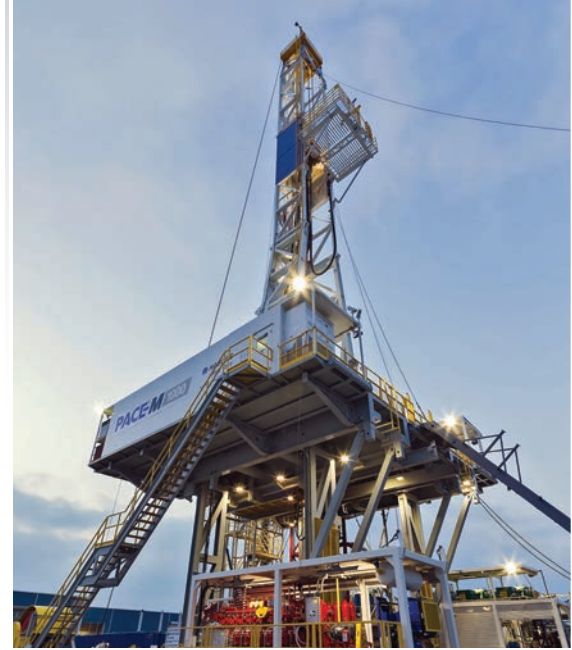
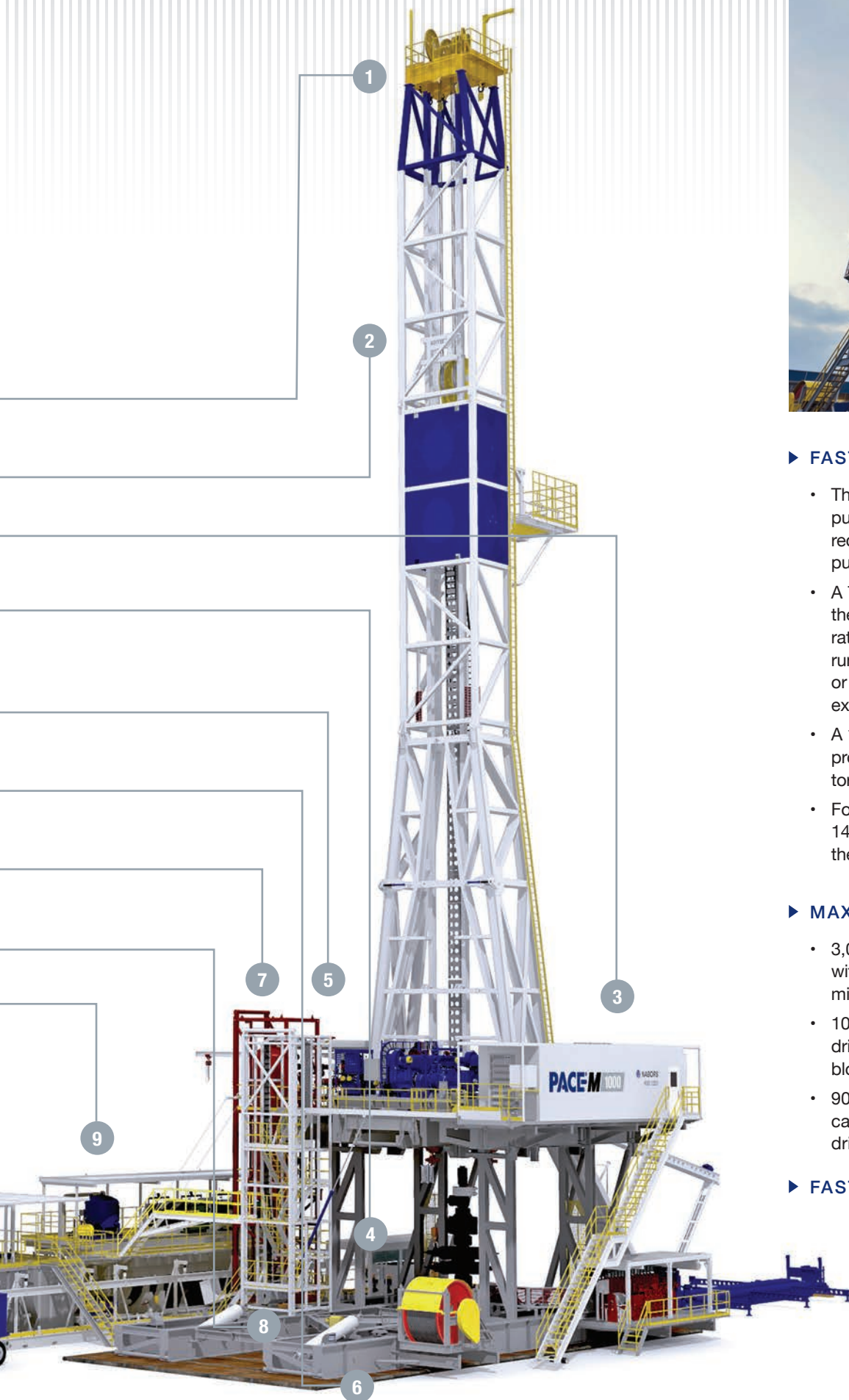


...the *PACE*<sup>®</sup>-M1000  
rig features advanced  
technology for  
maximum drilling  
performance.

# As lateral lengths continue to increase, drillers need a rig with more power and greater tripping speeds. The PACE®-M1000 rig features innovative advanced technologies that provide both while also improving rig move efficiency.

1. Hydraulically elevating mast and substructure with hookload rating of 1,000,000 lbs with 10 line string-up and setback rating of 900,000 lbs. 157ft x 30ft mast designed to be moved in one piece or 3 loads with top drive and travelling block integrated into the mast. The mast is also designed for accepting a top drive retract system.
2. 500 ton Canrig AC Top Drive with 51,400 ft-lbs of continuous torque at 120 rpm, providing a platform for advanced drilling performance tools.
3. Driller's cabin and console provide the latest in monitoring and control systems.
4. Substructure designed for 25ft celars, 30ft clear under rotary beam and 35ft to drill floor. Designed to be moved in one piece for in-field moves or six loads for long distant rig moves.
5. Canrig AC Commander™ Drawworks driven by two 1,500 hp motors, allowing the driller precise control and speed. The Drawworks has a maximum hoisting speed of 370 ft/min enabling a max trip speeds of more than 4000ft/hr.
6. Omni-directional walking system integrated into the substructure, allowing the rig to skid on both the X and Y axes, thereby eliminating any rig-up and rig-down of the system.
7. Choke manifold, Mud buster, Accumulator, Drill line spool and hydraulic unit mounted on the rig floor/sub structure moves with the rig when skidding.
8. Stand-alone raising skid designed to accommodate raising cylinders, mechanical hydraulic unit and controls required for raising the mast and substructure.
9. All the Mud processing equipment ride on a 450 bbl walking shaker/trip tank.
10. Three 1,600 hp mud pumps with 7,500 psi mud system, provide maximum hydraulic horsepower.
11. Four/five Caterpillar 3512C engines come with optional bi-fuel conversion capability.





### ► FASTER DRILLING

- Three 1,600-horsepower mud pumps deliver high flow rates when required and provide a backup pump if needed
- A 7,500 PSI mud system provides the required pressure to maximize rate of penetration (ROP) while running rotary steerable systems or conventional mud motors during extended-reach laterals
- A 1,150-horsepower top drive provides 51,400 ft-lbs continuous torque at 120 rpm
- Four/five 3512C engines rated at 1476-horsepower each provide all the power needed by the rig

### ► MAXIMUM TRIPPING SPEED

- 3,000-horsepower drawworks with hoisting speed of 380 feet per minute
- 1000-kip hook capacity at 10-line drill line string-up for maximum block speed
- 900-kip setback enables racking capacity of 30,000 feet of 5 1/2" drill pipe

### ► FASTER RIG MOVES





Pad-to-pad rig moves impact total well costs. The PACE®-M1000 features a simplified rig up/rig down process that reduces days per move and cost per move. Designed with a minimum number of loads for fast rig up, the new PACE®-M1000 rig can move in 4 to 6 days. Features include:

- Rig layout and independent power source enable simultaneous rig up of mast/sub and backyard
- Stand-Alone raising skid enables offline rig-up with out rig power, no disconnection of hoses there by reducing contamination. Fully automated raising system improves rig move efficiency.
- Integrated spill containment in center steel eliminates rig up of third party system and reduces environmental safety risks
- Extended BOP transport skid allows rotating head to remain rigged up on stack, eliminating rig up/rig down between pads
- Enhanced BOP handling system designed to handle multiple BOP's efficiently thereby reducing non-productive time.

#### ▶ ADVANCED WALKING CAPABILITIES

The PACE®-M1000 also features faster, more advanced walking capabilities for multi-well pad drilling. It is ideal for drilling up to four wells per pad. Features include:

- Standard walking distance of 150 feet, with the ability to increase based upon client's requirements
- Moves two feet per minute with full 900-kip setback
- Designed with large walking feet to reduce the load bearing on location to a maximum of 70 psi
- Provides self-leveling mechanism in the event of location settling and easily accommodates off-center surface holes
- Independent walking system allows the shaker tank to walk with the rig
- Semi-automated system designed to operate using a wireless remote control for faster walking

#### ▶ SAFER OPERATIONS

When moving between wells, the PACE®-M1000 rig reduces manual handling activities by approximately 90 percent compared to competitors. As such, enhanced safety features include:

- Walking shaker skid minimizes flow line handling between wells
- Choke manifold, mud buster accumulator, HPU skid and drill lines spool are mounted to the substructure and walk with the rig
- Integrated catwalk with walking system eliminates the need to reposition equipment between wells on a pad
- Electrical grasshopper integrated with the stair tower
- Standpipe manifold and service piping integrated with mud gas separator

Designed to deliver maximum drilling productivity, the PACE-M1000 further enhances drilling efficiencies and



### ▶ NEW RIGTELLIGENT™ MODULAR CONTROLS

The PACE®-M1000 comes with Nabors new, state-of-the-art Rigtelligent™ controls to further enhance drilling performance. Rigtelligent™ controls features intuitive, icon-based navigation screens that adjust based on current rig activity. Integrated with advanced downhole tools, the control system enables the automation of repetitive tasks and alerts the driller of any potential issues.

### ▶ RIGTELLIGENT™ CONTROLS FEATURE:

- A user-friendly interface design that resembles mobile device screens
- Icons that reflect the status of various equipment subsystems and provide the driller with more detailed, equipment-specific information
- Integration with other downhole technologies for streamlined management
- Ability to add additional rig services in controls, such as mudlogging

### ▶ WHY CHOOSE NABORS PACE®-M1000 RIG OVER THE COMPETITION?

- Faster tripping speed
- More power and faster drilling for longer laterals
- Faster and safer rig moves with fewer loads required
- User-friendly, simplified modular control system
- Safer, more automated operations
- Integrated directional drilling capabilities
- Remote monitoring and troubleshooting
- Lower drilling costs
- Greater setup flexibility, based upon location requirements
- Integrated sub/drill floor for faster and efficient rig walking
- Advanced walking capabilities

performance, the new PACE®-M1000  
and reduces flat time.



# Why Choose Nabors?

Nabors combines innovative products and services and the expertise of its people to make drilling operations safer, more reliable and more cost effective.

Our goal is to provide our customers with the highest level of excellence and performance – on every rig and well. Every time.

With operations in more than 20 countries, Nabors is one of the world's largest oil and gas drilling contractors. Our vision is to be the driller of choice for customers, investors and employees by focusing on technology, safety and performance. We not only provide global drilling services for both land and offshore, but we're also a leading provider of drilling equipment, software and technology. Combined with the experience of our experienced and well-trained crews, we continue to transform the global drilling industry by providing Rigtelligence<sup>SM</sup> for the Future.

Nabors has operated in Saudi Arabia for more than four decades through the acquisitions of Loffland Brothers

and Pool Energy Services. Nabors has enjoyed significant growth in Saudi Arabia, increasing from 20 operating rigs in the early 2000's to 42 today. Much of this growth is the result of over \$1 billion in investments in Saudi Arabia in the last 5 years. Our growth is also a result of our significant investment in our people, particularly our local workforce. We employed 290 local nationals in 2000, this has increased over seven-fold since 2000, and doubled since 2011, to roughly 2,200 local nationals employed today.

Nabors invests in developing our local workforce through our training center in Dhahran which combines start-of-the-art practical training and simulators with classroom-based theory training. Nabors also supports local workforce development through our sponsorship of SPSP, SADA, and alliances with local universities and vocational schools.

## Rigtelligence<sup>SM</sup> for the Future

Rigtelligence<sup>SM</sup> for the Future integrates the superior operational know-how of our people with advanced technologies that make our rigs smarter and more automated than other drilling rigs to create greater value for our customers. Our innovative systems, technologies and high-level engineering differentiate us from our competitors.

We offer an integrated suite of innovative drilling software, equipment and services to help customers save money and improve performance. These include performance tools that improve drilling operations, total control services for better rig efficiency and productivity and tubular services that provide safer and more efficient casing activities. See your marketing representative for more information.

### ► PERFORMANCE TOOLS

**DrillSmart™ Automatic Driller:** A best-in-class tool that provides the consistent, precise control of drilling parameters to avoid weight dumping and excessive slack off

**Total Control NonStop Driller:** A sub-based constant circulation system designed to improve drilling efficiency, operational safety, hole condition and equipment integration.

**ROCKit™:** A patented directional steering control system that oscillates drill pipe to reduce friction and increase penetration rate

**REVI™:** A real-time stick slip mitigation system that allows consistent application of more torque to bit in hard rock formations to extend bit life, reduce tool failures and increase penetration rate for significant savings in drilling time and cost

### ► TOTAL CONTROL SERVICES

**BOP Testing:** The broadest range of BOP testing and services, from installation to field-proven testing, to increase rig efficiency and productivity

**Rotating Control Devices:** Rotating heads and consumables at lower rates, eliminating the need for third-party rigging up equipment

**Variable Bore Rams:** Custom fit for customers' desired drilling applications to provide superior rig efficiency and reliability

**Remote Control Choke:** Providing customers with an integrated portfolio of drilling services, we offer premium quality chokes at competitive rates