PEMEX

ACHIEVE YOUR DRILLING OBJECTIVES WITH UNMATCHED SAFETY AND COST SAVINGS

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5 DECADES
OF MPD
EXPERIENCE

7,600+
JOBS
WORLDWIDE

98.2% OF
OPERATIONS
WITH ZERO NPT
IN 2018

SAVED OVER $18 MILLION
DEEPWATER US

SAVED OVER 15 HOURS
OFFSHORE MEXICO

CIRCULATED OUT INFLUX IN ONLY 4 HOURS
ONSHORE CANADA

REACHED 20,000-FT TD
DEEPWATER BRAZIL

MPD PERFORMANCE WINS

FREED STUCK PIPE IN <6 HOURS
NORTH SEA

CIRCULATED OUT 2 INFLUXES IN HOURS
OFFSHORE EGYPT

SAVED 20,000 BARRELS OF MUD
ONSHORE SAUDI ARABIA

SAVED OVER $18 MILLION
DEEPWATER INDONESIA

MPD PERFORMANCE WINS

DECADES OF MPD LEADERSHIP

1968
First RCD in the world

1983 – 1996
Expanded our RCD portfolio

1999
Debuted DDV® downhole deployment valve

2004
First MPD job from a semisubmersible

2007
Introduced award-winning Microflux® control system

2008
Improved RCD design for marine environments

2010
First API 16RCD certification

2014
First fully integrated MPD riser assembly below the termination joint on the rig

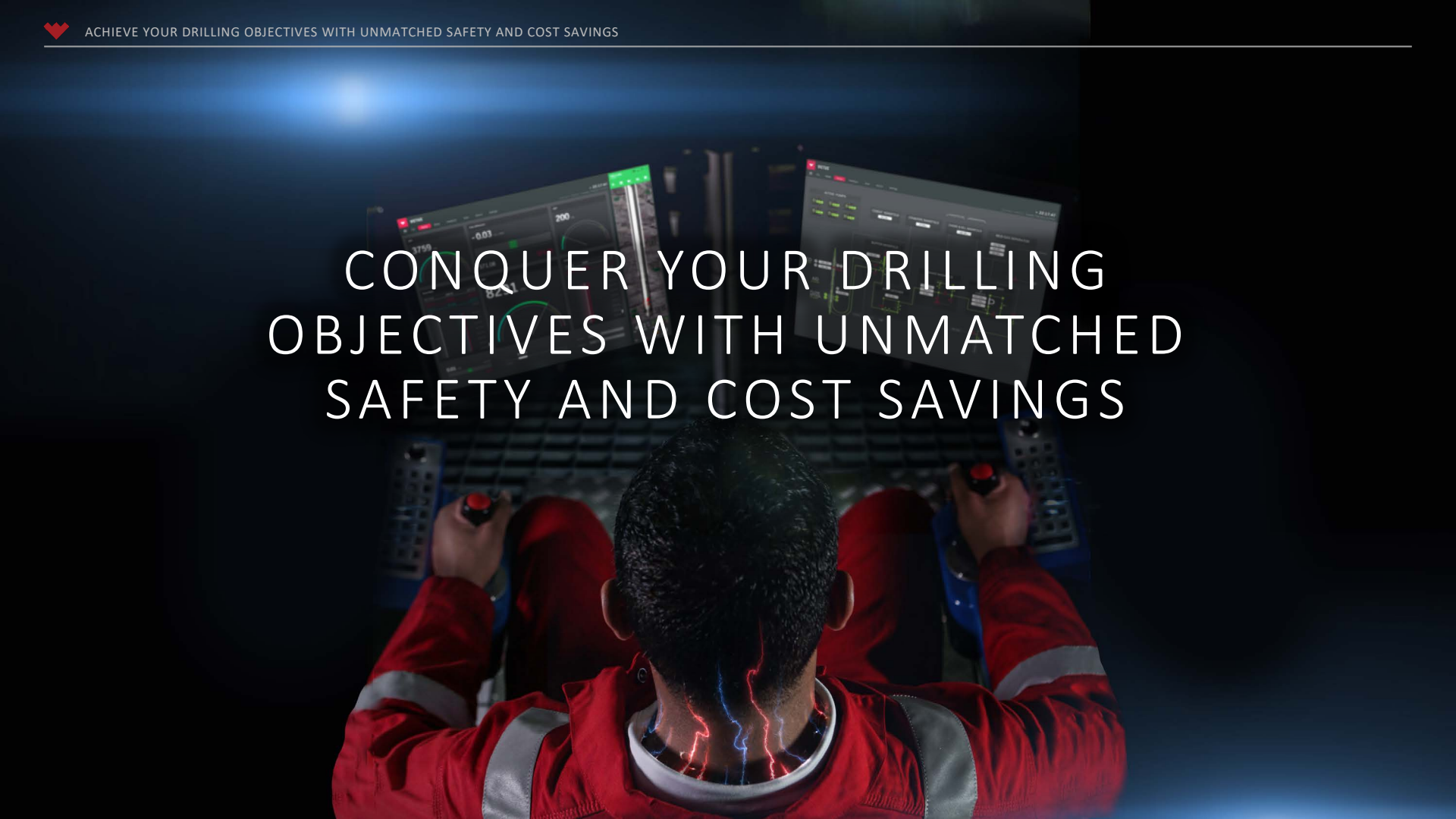
2019
First automated MPD riser system

Introduced Victus™ intelligent MPD

VICTORY OVER YOUR CHALLENGES

DEFEAT YOUR OPERATIONAL HAZARDS

CONQUER YOUR DRILLING OBJECTIVES WITH UNMATCHED SAFETY AND COST SAVINGS



TAKES CONTROL OF INFLUXES THROUGH **AUTOMATED MONITORING AND ACTION**

USES AN ALGORITHMIC MODEL BASED ON **DECADES OF WELL DATA**

ELIMINATES DRILLING HAZARDS AND RESERVES THE BOP FOR EMERGENCIES

INCREASES ROP, LOWERS FLUID EXPENSES, AND OPTIMIZES WELL ARCHITECTURE

INTEGRATES RIG EQUIPMENT FOR
MACHINE-TO-MACHINE COMMUNICATION

ANALYZES AND REACTS TO DOWNHOLE CONDITIONS **IN REAL TIME**

AUTOMATES RAPID RESPONSES
FROM A CENTRAL LOCATION

PRECISE EARLY KICK **RESPONSE**

Victus intelligent MPD works in **any drilling environment**

DEEPWATER | SHALLOW WATER | LAND

VICTUS™

INTELLIGENT MPD

TECHNICAL
SPECIALISTS

INTELLIGENT
CONTROL SYSTEM

AUTOMATED
MPD RISER SYSTEM

TOPSIDE
EQUIPMENT

KNOWLEDGE THAT EMPOWERS

Technical Specialists

CENTURIES OF CUMULATIVE KNOWLEDGE
IN EQUIPMENT DESIGN

TURNKEY INSTALLATION AND COMMISSIONING
WITH CERTIFIED SPECIALISTS

EXCEPTIONAL CONSULTING ENGINEERS
FROM WELL PLANNING TO DRILLING OPTIMIZATION

SUPPORTIVE CUSTOMER SERVICE
FOR OPTIMAL PERFORMANCE WELL AFTER WELL

HANDS-ON TRAINING AND DEVELOPMENT
FOR NEW MPD ENGINEERS

OPERATIONAL EXCELLENCE SYSTEMS
TO MONITOR AND TRACK PERFORMANCE

HIGH-QUALITY END-TO-END SOLUTION

SAFETY AND QUALITY

R&D

MANUFACTURING

INSTALLATION AND COMMISSIONING

MPD OPERATIONS

CUSTOMER SERVICE AND SUPPORT

TRAINING AND DEVELOPMENT

INTELLIGENT CONTROL SYSTEM

Enhance your brainpower with advanced modeling and automation

PROVEN TO DETECT, CONTROL, AND CIRCULATE OUT INFLUXES

INDUSTRY'S MOST ADVANCED HYDRAULICS MODEL

INTELLIGENT CONTROL SYSTEM

DEVELOPED WITH **OVER 3.5 MILLION HOURS OF MPD DATA**

1ST DNV-CERTIFIED MPD CONTROL SYSTEM

Advanced hydraulics model

Smart control algorithms

Easy-to-integrate, secure PLC system

Simplified UI and alerts

INTELLIGENT CONTROL SYSTEM

Condition-based monitoring

Reliable automated reporting

Remote control via single user interface

Data consistency

AUTOMATED MPD RISER SYSTEM

Expedite offshore installation with an integrated, compact, and smart design

REDUCE INSTALLATION TIME FROM **2 DAYS** TO **20 MINUTES**

REMOVE PEOPLE FROM DANGER ZONES

CONNECT UMBILICAL & FLOWLINES **ALL AT ONCE**

SAFE, RELIABLE OPERATIONS **EVERY TIME**

CONNECTION HUB INTEGRATES SUBSEA CONTROL UMBILICAL AND FLOWLINES

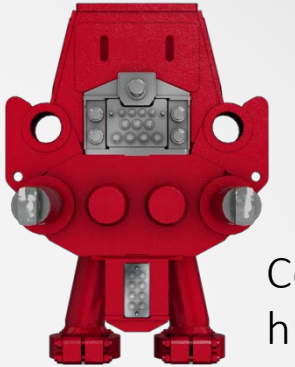
ROBOTIC ARM ELIMINATES MANUAL WORK IN THE MOONPOOL

SMART RCD ENABLES PREDICTIVE MAINTENANCE AND EARLY LEAK DETECTION

SUBSEA SURVEILLANCE SYSTEM ENABLES VISUAL MONITORING AND REDUCES ROV USE

SINGLE SUBSEA CONTROL UMBILICAL TRANSMITS DATA WITH FAST FIBER OPTICS

Riser



Connection hub

Robotic arm

TOPSIDE EQUIPMENT

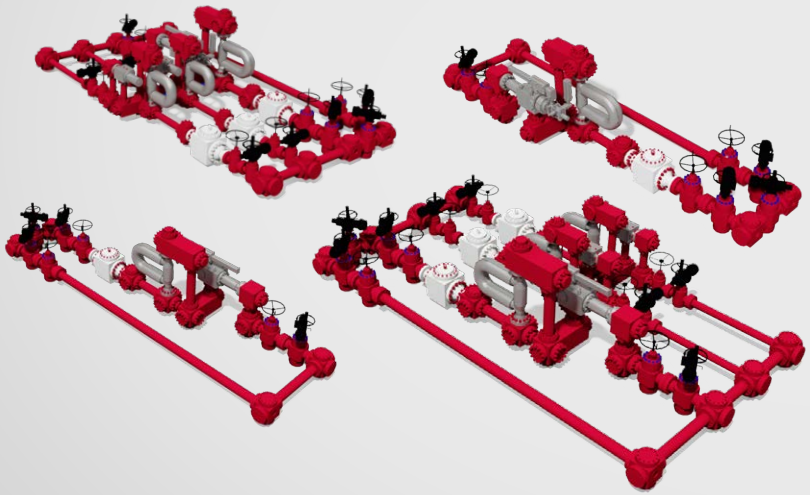
Customize this best-in-class design for any rig

DESIGN BASED ON **DECADES OF PERFORMANCE**

BUILT-IN REDUNDANCIES TO CONTINUE DRILLING

DETECTS & CONTROLS INFLUXES IN SECONDS

SMALL, MODULAR RIG FOOTPRINT



CUSTOMIZABLE MPD MANIFOLD

REMOTE CHOKE SWAPPING

UPSTREAM CORIOLIS FLOWMETER OPTION

REMOTELY OPERATED ELECTRIC OR HYDRAULIC VALVES

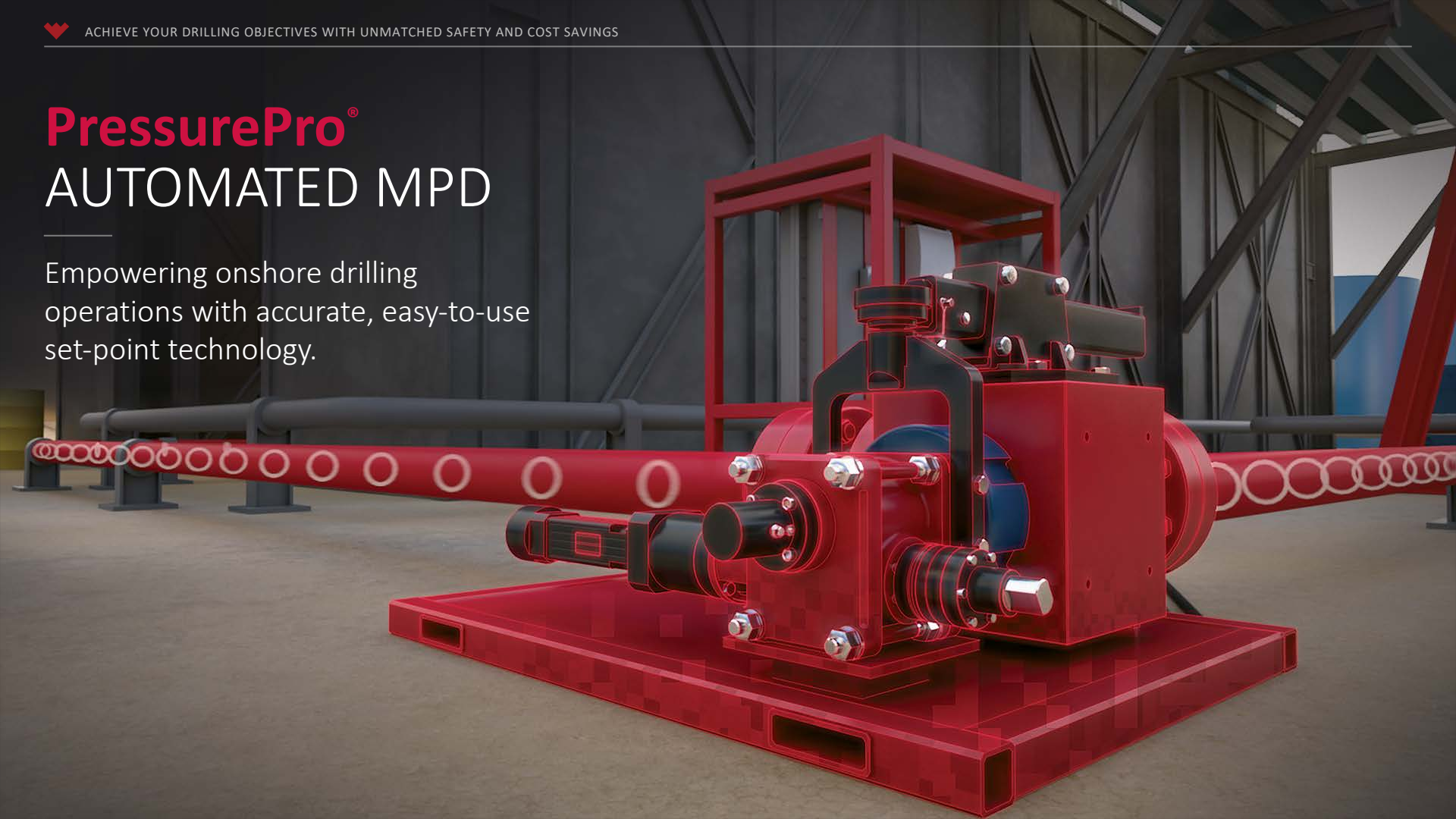
REDUCED FRICTIONAL PRESSURE LOSS

INTEGRATED JUNK CATCHER

CONTINUOUS FLUID ANALYSIS

PressurePro®
AUTOMATED MPD

Empowering onshore drilling operations with accurate, easy-to-use set-point technology.



PressurePro®
AUTOMATED MPD

- Precise control
- Small footprint
- Simple operation
- Enhanced safety
- Monitors real-time parameters
- Fewer field personnel
- Manages ballooning, high-gas content and losses
- Good for medium-large drilling margins

GRACIAS
THANK YOU