World Oil®

ADVANCES IN DRILLING

Enhanced bearing pack technology improves downhole motor reliability

MIDDLE EAST/NORTH AFRICA

NOCs expand production, maintain high levels of development

SHALETECH: NIOBRARA

Operators address near-term economic realities by consolidating holdings

DEEPWATER/SUBSEA

New pressure-testing services allow operators to determine well behavior





CONTENTS

OCTOBER 2016 / VOL. 237 NO. 10



SPECIAL FOCUS: ADVANCES IN DRILLING

- Enhanced bearing pack technology improves motor reliability
 - P. Shwets / C. Kennedy / O. Marsa
- 37 **Directional drilling advances** deliver tight-cluster, extended-reach wells in unconsolidated sands
 - M. Phillips / R. Andre C. Coudyzer / P. Blanchard
- 43 Geosteering in complex lithologies utilizes full formation evaluation from mudlogging data

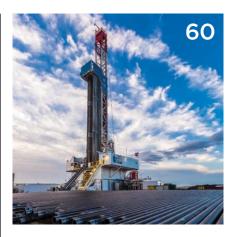
F. J. Bataller / G. Beda V. H. Goitia

DRILLING BIT DESIGN

Challenging economics require drill bit improvements to lower break-even costs C. Fleming

RESERVOIR MANAGEMENT

53 Integrated asset management connects the dots for optimized field development Z. Noor



POLITICS/REGULATION

Presidential nominees' energy policies can potentially impact U.S. upstream industry

R. H. Bezdek

SHALETECH: NIOBRARA SHALE

- "Go long" typical game plan, as key players consolidate holdings
 - J. Redden
- 66 Continuous completion innovation in the Niobrara

REGIONAL REPORT: MENA

MENA output swells, as the region defends global market share

E. Snyder

DEEPWATER/SUBSEA

Wireline formation pressure testing benefits extended to low-mobility environments

H. Nieuwoudt

GAS PROCESSING SUPPLEMENT

GP-1 **Technology and Business** Information for the Global **Gas Processing Industry**



COLUMNS

- First oil Some oil price relief appears-maybe
- 13 **Energy issues** Up, down, spinning around
- 15 What's new in exploration Is "intuitive detective" still a valid moniker?
- 17 **Drilling advances** Tearing down the walls
- 19 What's new in production It's about time
- 21 Offshore in depth Disaster movie shines unwelcome spotlight on offshore industry
- 23 Oil and gas in the capitals Obama's administration sends parting gifts to the industry
- 25 **Executive viewpoint** Data and analytics take hold in oil and gas production
- 86 The last barrel More fracing hypocrisy

NEWS AND RESOURCES

- 9 World of oil and gas
- 27 Industry at a glance
- 80 People in the industry
- 81 Companies in the news
- 82 New products and services
- 83 Marketplace / Advertising sales offices
- 84 Advertisers' index
- Meetings and events 85

ABOUT THE COVER

During December 2015, Latshaw Drilling Company's Rig #44, a 1,500-hp NOV Ideal AC unit, drills the Shepard 825H well on a moonscape-like tract in Culberson County, in the Delaware basin of far West Texas. The rig is under contract to COG Operating (Concho Resources). Image: Latshaw Drilling Company.