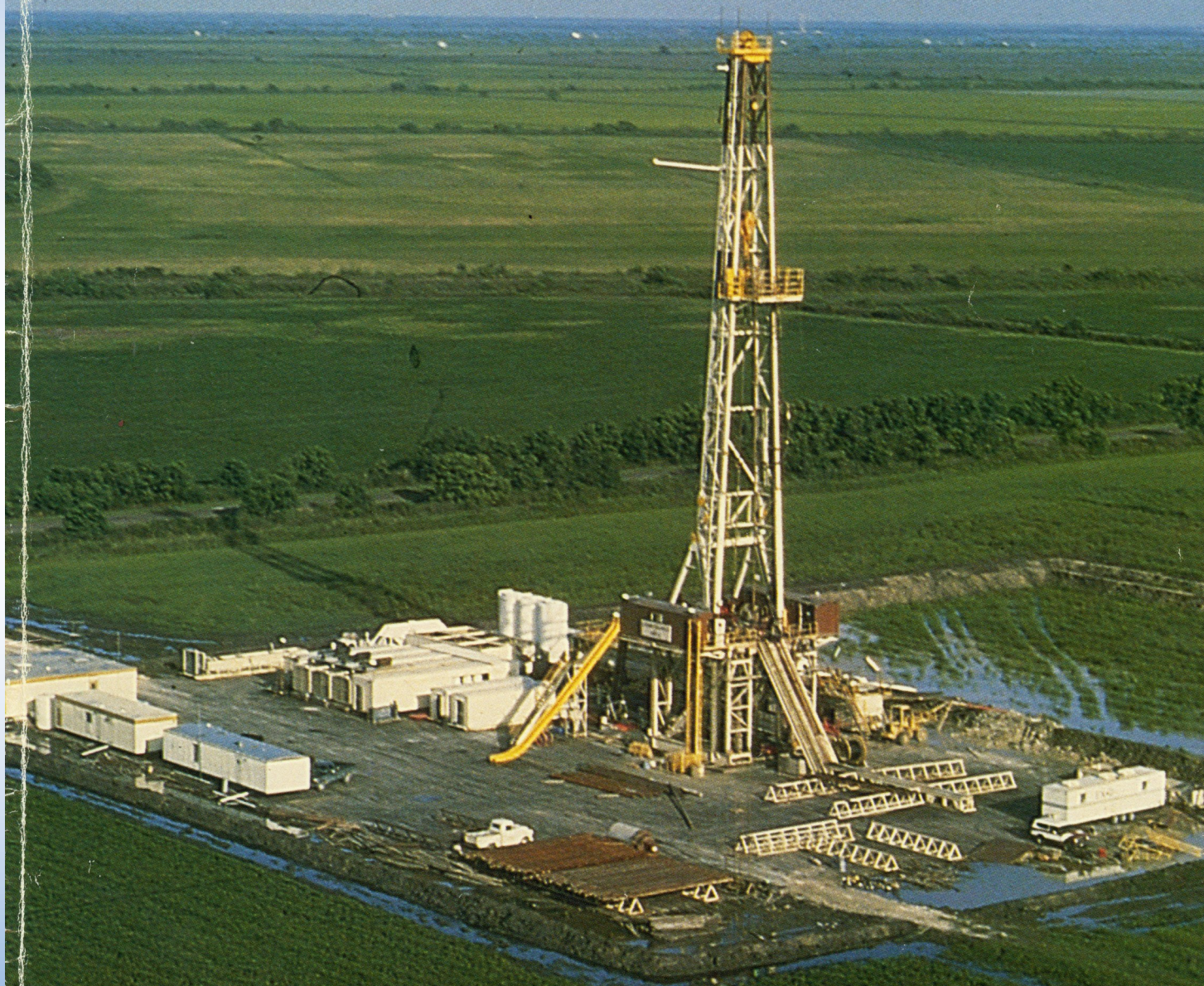




OCTOBER 1983

THE
WELLSITE
PUBLICATION



31st ANNUAL ROTARY RIG CENSUS

371 rigs pared from U.S.A. fleet

ASSOCIATED PUBLISHERS, INC.

Founded 1939 by Ted W. Mayborn
4707 West Lovers Lane
P.O. Box 7000 (Mail)
Dallas, Texas 75209
Phone (214) 358-3456

Mitch Mayborn, Editor/Publisher
Robert O. Frederick, Editor Emeritus
Greg Holloway, Special Projects Director
Ludonna Jackson, Production Manager
Ellen Mayborn, Advertising Production/
Classified Advertising

Mike Slaton, Managing Editor
Dorothy Monroe, Associate Editor
Ann Struhs, Associate Editor
Darnell Peacock, Contributing Editor
Henry Martin, Editorial Research
William Britt, Staff Illustrator
Jon Fulmer, Editorial Assistant

EXECUTIVE OFFICES

Ted W. Mayborn, Corporate Advisor
Jo Kunz, Business Manager
Mariys Overbeck, Circulation Manager
Doris Tolman, Promotion Coordinator

Gulf Coast Area

Bill Bukauskas, Vice President, Sales
Mildred Boyd, Business Manager
(713) 784-2351
6223 Richmond Ave., Suite 300
Houston, Texas 77057

Mid-Continent

Bill Bukauskas, Vice President, Sales
Bill Perry, Vice President
Mike Slaton, Western Region Manager
(214) 358-3456, 4707 West Lovers Lane
Dallas, Texas 75209

Midwest Division

Al Gravenhorst & Associates
Steve Skinner, Don Johnson
5901 N. Cicero Ave.
Chicago, Illinois 60646
(312) 545-8621

East Coast Division

Al Gravenhorst & Associates
John Sensenstein
355 U.S. Rt. 46
Mountain Lakes, New Jersey 07046
(201) 625-8660

UK and Europe - Mike Angeli

Eastgate House, Onslow Road,
Walton-on-Thames, Surrey KT 12 5AZ,
Tel: Walton-on-Thames 25524
(STD Code 93 22)
Telex: 21879 ATTN UML

Japan - Bancho Media Service

Dai-ichi Nisawa Bldg. (5th Flr.)
3 - 1 Kanda Tacho 2-chome
Chiyoda-ku, Tokyo 101, Japan
Tel: Tokyo 03 - 252 - 2721
Telex: J25472 (BMSINC)
Genzo Uchida - President
Yoshinori Ikeda - General Manager



CIRCULATION: Established 1939. Subscriptions: Free to qualified active oil company executives, engineering and supervisory personnel actively engaged in drilling, completing and remedial servicing of oil, gas wells, drilling contractors and their key wellsite supervisors. Well servicing contractors and field managers. Manufacturers, technical service company executives and field managers and technicians, manufacturer executives (OEM) and supply executives and store managers in active wellsite areas \$18.75 per year. Outside the industry \$34.50 per year. Single copies \$2.25; back copies, if available \$3.00. International Air-mail Postage \$45.00 in advance.

ADDRESS all communications to P.O. Box 7000, Dallas, Texas 75209. Not responsible for unsolicited manuscripts. *Drilling, The Wellsite Publication* (USPS 181280 ISSN 0012-6241) is published monthly except semi-monthly in April by Associated Publishers, Inc., 4707 West Lovers Lane, Dallas, Texas 75209. Published first of each month. Forms close the first of month preceding. ©COPYRIGHT, 1983 in the United States by Associated Publishers, Inc. Second-Class postage paid at Dallas, Texas. No part of this publication may be reproduced without written permission from *Drilling, The Wellsite Publication*. POSTMASTER: Send address changes to Circulation Manager, *Drilling*, P.O. Box 7000, Dallas, Texas 75209.



October 1983

Vol. 44, No. 13
Issue No. 565

31ST ANNUAL ROTARY RIG CENSUS

The 1983 Reed Rock Bit Company's 31st Annual Rotary Rig Census presented by *Drilling, the Wellsite Publication* finds that the domestic rig fleet has been reduced by 371 rigs and utilization drops to 48.2 percent. For all the details turn to....

THE ROTARY RIG CENSUS.....	35
The Reed Census Takers.....	41
Census ground rules.....	44
U.S. Rig Fleet—Changes in '83 and projections for '84.....	46
Rig market notes.....	11

FEATURES

The rotary shouldered connection equation and tool joint torsional strength curve.....	50
Catalog recalls 'Pulleys, gears and a hole in the ground'.....	60
Drilling Four & Five Mile Club awards.....	USA 2
Wellsite data section.....	82
Energy demands to grow.....	USA 8
Petroleum research center changes management.....	79
Executives receive service award.....	79

COMPLETION, EOR, WELL SERVICE

Chemical market may double by 1990.....	13
EOR: From dump flood to five spot-a technology takes shape.....	66
Fourth quarter to pick up for servicing.....	15
What's a well servicing rig worth?.....	15

NEW RIGS

California platform rig keeps land option open.....	63
Harsh environment <i>Gorilla</i> takes shape at Vicksburg.....	76

OFFSHORE, INTERNATIONAL

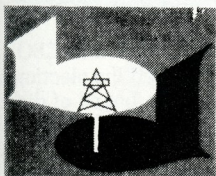
40 percent of Free World's production will be offshore by 1990..	17
STP delivered to Prudhoe Bay.....	78
Gulf has Celtic Sea discovery.....	78
Cameron Parish site of Amoco drilling program.....	86
SPECIAL REPORT: Industry weathers Hurricane Alicia.....	USA 6
Exxon and Shell sign exploration contracts with PRC.....	79

DEPARTMENTS

Advertisers Index.....	94	Morning Report.....	92, 93
Classified Advertising.....	94	New Literature.....	29, 31
Drilling Log.....	19-22	New Tools.....	25, 27, 73-75
Equipment Men.....	90, 91	Oilmen.....	89
Knowledge Box.....	9	Reader Data Card.....	94A

About the cover — Rated to 16,000 ft, *Latshaw Drilling Company Rig 1* is shown on location in Chambers County, Texas in the days right after Hurricane Alicia. Fifteen miles from High Island, they got 8-in. of water on this location — but the new location on East Bay got 4 ft. Both wells are for Prudential Drilling, an E&P subsidiary of Gulf States Utilities. Photo by Trent B. Latshaw, president, Latshaw Drilling.

BASIN DRILLING CORP.



900 OIL CENTER • WEST
2601 NORTHWEST EXPRESSWAY
OKLAHOMA CITY, OKLAHOMA 73112
(405) 840-2911

Operating 17 rotary power rigs in Oklahoma and Southeast Texas from 8,000 to 22,000 feet.

RATLIFF DRILLING COMPANY

Barton W. Ratliff, President
P.O. Box 988 Duncan, Okla. 73533
(405) 255-2916

Oil and Gas Well
Drilling Services Throughout
Oklahoma • North Dakota • Texas



17 Rigs - 8,000 to 35,000
Experienced Technical and Operating Personnel
Contract Drilling
Turnkey Drilling Services



FORTY YEARS CONTRACTING
OPERATING 23 RIGS
IN MID-CONTINENT & ROCKY MOUNTAINS
Operation Offices

Oklahoma City, OK (405) 681-6611	Roosevelt, UT (801) 722-2421
J. L. Woods, VP Drig.	Bill Yadon,
Roy Hisel, VP Contracts Mgr.	Rocky Mountain
L. Glenn Moore, Consultant	Drilling Supt.
Denver, CO (303) 629-1295	
James D. Craig, VP Contracts	

Viersen & Cochran Drilling Company
P.O. Box 19227 Phone (405) 681-6611
Oklahoma City, Oklahoma 73144

the morning report

Location: Grant County, Washington,
Sec. 9, T15N, R25E

Well Designation: BN 1-9

Operator: Shell Oil Co.

Contractor: Brinkerhoff-Signal, Rig 53, a National rated to 20,000 ft.

Update: Operator designated the well a tight hole in mid-September with little technical or geological information being released. A show of gas developed in mud returns September 18 from a zone at around 12,000 ft. Gas was being flared at last report. Volume of gas was described as "not much but enough to flare." Drilling was continuing below 12,000 ft.

Significance: Permitted to 20,000 ft, the BN 1-9 is potentially the deepest well drilled in Washington. (See *Drilling's Morning Report*, June '83) Though far too soon to evaluate, the show of gas offers encouragement for commercial production in a remote region. The well is in the Saddle Mountains about 25 miles west of Othello. Well site is about 175 miles east-northeast of nearest production, which is in Oregon's Mist gas fields. There is no commercial oil or gas production in Washington at present. BN 1-9 was spudded December 20, 1982. A fishing job was under way in mid-April 1983 at 5621 ft. By mid-May operator was drilling ahead below 6500 ft. Another fishing job developed in July at 8390 ft. Logging operations were under way in mid-August at 8773 ft.

Location: Beckham County, Oklahoma
Sec. 1, T9N, 22W

Well Designation: Robinson No. 1-1

Operator: GHK Petroleum Co.

Update: In mid-July Parker's Rig 201 was drilling ahead at

LATSHAW DRILLING COMPANY

Operating rigs in
Texas Gulf Coast and
Oklahoma

Premium Iron-Quality People
10,000'-25,000' Range

Trent Latshaw - President
Claude Lang - VP Operations

(713) 789-6222

10550 Richmond #240
Houston, Texas 77042

Robinson No. 1-1

26,969 ft. Spudded 7/6/81; 20-in. to 4994 ft; 133/8-in. to 15,437 ft; 7 3/4-in. to 23,326 ft; lost fish, plugged back to 19,116 ft. Being operated as a tight hole in mid-September, reported to be fishing. Depth at 28,365 ft.

Significance: Permitted to 33,000 ft, the well will be the deepest hole in the U.S.A. if it surpasses the nearby Bertha Roger's 31,441 ft TD.

Location: Los Angeles County, California,
Sec. 23, T4N, R17W, in the Castiac Junction field area.

Well Designation: NL&F 78

Operator: Exxon Corp.

Contractor: Brinkerhoff-Signal Rig 90

Update: In early July, the well was sidetracked around a fish at 16,122 ft. By September 20, operator was drilling ahead below 18,030 ft toward a 25,000 ft record depth target.

Significance: The 78 NL&F is being followed closely for both geological and technological reasons. A state depth record would be set if the hole reaches below the Sandhills No. 64X-34 drilled by Tenneco and Superior to 22,711 ft in 1974. Previous deepest well in the field is Exxon's NL&F 65 drilled to 14,426 ft in 1959.

Location: Atlantic Ocean, Wilmington Canyon Block 587

Well Designation: Civet

Operator: Shell Offshore Inc.

Contractor: Sonat Offshore, *Discoverer Seven Seas*

Update: As of September 26, the BOP riser was in place and they were drilling ahead at 4300 ft below mud line and 10,780 ft below sea level in 6448 ft of water. Rig arrived on location late which will delay second and third holds, the Hyena and Eland wells.

Significance: Shell has scheduled three of five wells in a deep water exploration program. The first well, the Civet, spudded in late July in Wilmington Canyon Block 587. The well will be drilled in 6448 ft of water to a projected depth of 14,500 ft below sea level by Sonat Offshore's *Discoverer Seven Seas* drillship (which drilled the current water depth record well, the GLP-1, in 5624 ft of water in the Mediterranean). The next two locations are the Hyena and the Eland to be drilled in Blocks 372 and 586, in waters up to 7800 ft deep.

DRILLING CONTRACTORS AND OIL PRODUCERS



830 Sutton Place
Phone (316) 263-6209
Wichita, Kansas 67202

Harkins Company

P.O. Box 1940 • 664-3427
ALICE, TEXAS 78333

DRILLING & PRODUCING

14 POWER RIGS IN SOUTH TEXAS

H. B. (Hank) HARKINS
Chairman/CEO

RAY BUTLER
Vice Chairman of the Board

BURT HARKINS
President/COO



Rotary Rigs in
Kansas,
Oklahoma and
Texas Panhandle

(316) 267-1333



JHJ DRILLING COMPANY

333 North Belt East Suite 620 Houston, Texas 77060
Phone (713) 999-4980

Houston, TX

Laurel, MS

H. E. "Mac" McInnis, Pres.

Paul Thomas, Contracts

Billy Brown, Contracts

Route 4, Box 618B

Jerry L. Gibson, VP Adm.

Ellisville, MS 39437

Barbara L. Griffin, Controller

Phone (601) 425-2523 (Laurel)

10-30,000 Foot Rigs with Camps • Experienced Crews

Onshore, Offshore
and in Search



Moran
Bros.
Inc.

3 Greenspoint Plaza
233 Benmar Drive
P. O. Box 4502
Houston, TX 77210
(713) 820-1865

