



Coring Performance for the Ages.

622 feet of perfect core in a single run.

The cost savings alone are monumental.

- Objective:** Unprecedented, ultra-long coring runs to recover the highest quality, best preserved cores at higher ROP without tripping; delivering significant time and cost savings.
- Environment:** Khuff gas formation, Qatar, 9,200 ft (2,804 m).
- Technology:** INTEQ HT Series™ ultra-long core barrels and QuickCore™ core bits. Reliable aluminum inner barrels. Non-rotating inner tube stabilizers.
- Answers:** Reduced full coring program of 1,500 ft (457 m) of Khuff formation from 20 days to nine. World-record single core run of 622 ft (190 m) at an average ROP of 15 ft/hr (5 m/hr).

Get rock-solid coring answers all at once at www.bakerhughes.com/coring.



Statistically SUPERIOR

Energy Industry Information Products to Fit Your Needs

Energy Industry Surveys In Excel

Detailed surveys for sectors of the energy industry from Oil & Gas Journal, Offshore, and other industry sources. Presented in Excel format to aid industry analysis. The most efficient tool for evaluating industry activity. Surveys cover the refining, exploration & production, processing and transportation energy sectors. Both current and historical data available. Multi-user license available for company use.

Energy Industry Directories in Electronic Format

Comprehensive directories for sectors of the energy industry worldwide. Electronic directories -- updated frequently, along with key web site and e-mail links to company listings. An indispensable tool for locating current industry contacts. Most complete set of listings available in the energy industry.

Energy Industry Statistics in Excel

Statistics for all segments of the energy industry from two sources. The massive "OGJ Energy Database-HaverData" comprehensive database of energy industry statistics and the OGJ Online Research Center set of key statistical tables measuring industry activity "Energy Industry Statistical Tables in Excel". Easy to use menu systems for finding the relevant data. All of the historical statistical data you will need for analyzing ongoing industry activity in convenient spreadsheet format. One time purchase or annual subscriptions available.

Energy Industry Research, Strategic and Executive Reports

In-depth reports covering a wide variety of energy industry topics. Reports from Oil & Gas Journal and recognized energy industry experts. Regional reports on key producing areas in the world. Topical information on subjects such as: E&P Risk Evaluation, Natural Gas Futures Market, Unconventional Gas, Marginal Wells, guides to doing business internationally and much more.

Detailed product descriptions, free samples and ordering information on the web site.

OIL & GAS JOURNAL
online research center™

Web Site: www.ogjresearch.com

E-mail: orcinfo@pennwell.com

Tel for Information: (918) 831-9488

What is your energy information need?

OGJ Online Research Center has the product

For details and samples, go to:

www.ogjresearch.com

Week of Aug. 24, 2009/US\$10.00

OIL & GAS JOURNAL®

International Petroleum News and Technology / www.ogjonline.com

PennWell®



Exploration and Development Frontiers

***International upstream: a 5-year roller coaster
Field cases illustrate MEOR effectiveness
Analysis foresees decline in US gasoline imports
Leak technology completes multifeature inspections***

NITECH™ NRU WORKS. TAKE OUR WORD FOR IT.

“ BCKK Engineering’s Nitech™ NRU process works day-in and day-out, anywhere on earth. Plus BCKK goes beyond engineering to provide technical expertise, intelligent design, installation guidance and help in integrating our Nitech™ NRU technology with other processing requirements like we did for this grass roots treating facility. ”

Bryon Cheatham, BCKK Process and Mechanical Group Manager



THIS IS
BCKK
THIS IS
BEYOND ENGINEERING.

GAS TREATING AND PROCESSING DESIGN. SOLUTIONS. NITROGEN, HELIUM, CO₂ TECHNOLOGY. BEYOND ENGINEERING.

In 2005, Hiland Energy Partners chose BCKK for design and installation of their Badlands Gas Plant in North Dakota. Hiland chose the patented Nitech™ NRU to reduce increasing volumes of nitrogen in their fire flood project from as high as 80% to a target of 10%. BCKK’s solution included integrated NGL extraction with the Nitech™ NRU process, CO₂ extraction, and liquid product fractionation. As a result, Hiland was able to sell multiple NGL product streams including propane. Since August 2007, this Nitech™ NRU has operated in extreme climates and has enabled Hiland to generate saleable gas, fuel gas, and liquids from a previously unmarketable resource. See more successes at bckk.com.



2500 North Big Spring, Suite 230 • Midland, Texas 79705 • 432.685.6095 • 888-518-6459 • www.bckk.com

OIL & GAS JOURNAL®

Aug. 24, 2009
Volume 107.32

EXPLORATION AND DEVELOPMENT FRONTIERS

Remote, underexplored basins still objects of exploration
Alan Petzet

36



REGULAR FEATURES

Newsletter	5
Calendar	12
Journally Speaking	16
Editorial	18
Equipment/Software/Literature	55
Services/Suppliers	56
Statistics	58
Classifieds	61
Advertisers' Index	63
Editor's Perspective/Market Journal	64

COVER

Part of the Railbelt forest fire, Alaska's largest in 2009, dwarfs a Doyon Drilling Co. rig drilling the Nunivak exploration well for Rampart Energy Co., Denver, in the nonproducing Nenana basin north of Denali National Park & Preserve. OGJ's Exploration & Development Frontiers report has an article about exploration in several of the world's remote and underexplored basins, starting on p. 36. Photo by James Mery, Doyon Ltd.



online

The full text of Oil & Gas Journal is available through OJ Online, Oil & Gas Journal's internet-based energy information service, at <http://www.ogjonline.com>. For information, send an e-mail message to webmaster@ogjonline.com.



JOIN AMERICA'S CHAMPION OF NATURAL GAS



CHESAPEAKE IS ONE OF AMERICA'S LEADING PRODUCERS OF NATURAL GAS. We're also proud to be listed among the **FORTUNE 100 Best Companies To Work For** in 2009. Chesapeake offers rewarding opportunities in many career areas:

**Drilling Engineers • Reservoir Engineers • EH&S
Production Engineers • Facilities Engineers
Pipeline Specialists • Geologists • Petrophysicists**

Chesapeake has gained national recognition as a top-paying company with outstanding benefits and a generous stock-award plan.

**FORTUNE
100 BEST
COMPANIES
TO WORK FOR 2009**

Chesapeake is a dynamic, fast-growing organization of professionals who are committed to our company, our communities and our environment. Join us as we champion natural gas – the answer to America's energy future.



AMERICA'S CHAMPION OF NATURAL GAS™

NYSE:CHK

APPLY ONLINE AT CHK.COM

GENERAL INTEREST

Editorial: Unsound energy thinking 18
International upstream: a 5-year roller coaster 20
 Graham Kellas
RIIA: West has exaggerated fear of Asia over African oil 24
 Eric Watkins
WATCHING THE WORLD: Corrib project delayed again 25
Egyptians protest sale of natural gas to Israel 26
 Eric Watkins
Coalition planning rallies against cap-and-trade program 26
 Nick Snow
WATCHING GOVERNMENT: An anomaly among indicators 28
Magellan settles charges stemming from 2004 ammonia spills 28
 Nick Snow
CFTC to examine CCE's carbon financial instrument 29
 Nick Snow
Western GOM lease sale attracts \$115 million in apparent high bids 29
GAO considers refinery outage impact data gaps 30
 Nick Snow
Brazil contemplating changes in oil law 33
 Paula Dittrick

EXPLORATION & DEVELOPMENT

Special Report: Remote, underexplored basins still objects of exploration 36
 Alan Petzet

DRILLING & PRODUCTION

MEOR APPLICATIONS—Conclusion: Field cases illustrate MEOR effectiveness 41
 Chang Hong Gao, Abdulrazag Zekri, Khaled El-Tarabily

PROCESSING

Analysis foresees decline in US gasoline imports 48
 John R. Auers, John M. Mayes

TRANSPORTATION

New MFL technology completes single-run multifeature inspections 52
 Martin Bluck

PennWell, Houston office

1455 West Loop South, Suite 400, Houston, TX 77027
 Telephone 713.621.9720 / Fax 713.963.6285 / Web site
www.ojonline.com

Editor Bob Tippee, bobt@ojonline.com
 Chief Editor-Exploration Alan Petzet, alanp@ojonline.com
 Chief Technology Editor-LNG/Gas Processing
 Warren R. True, warrant@ojonline.com
 Production Editor Guntis Moritis, guntism@ojonline.com
 Pipeline Editor Christopher E. Smith, chriss@ojonline.com
 Senior Editor-Economics Marilyn Radler, marilynr@ojonline.com
 Senior Editor Steven Poruban, stevep@ojonline.com
 Senior Writer Sam Fletcher, samf@ojonline.com
 Senior Staff Writer Paula Dittrick, paulad@ojonline.com
 Survey Editor/News Writer Lena Koottungal, lkoottungal@ojonline.com
 Editorial Assistant Linda Barzar, lbarzar@pennwell.com

Vice-President/Group Publishing Director

Paul Westervelt, pwestervelt@pennwell.com
 Vice-President/Custom Publishing Roy Markum, roym@pennwell.com

PennWell, Tulsa office

1421 S. Sheridan Rd., Tulsa, OK 74112
 PO Box 1260, Tulsa, OK 74101
 Telephone 918.835.3161 / Fax 918.832.9290
 Presentation/Equipment Editor Jim Stilwell, jims@pennwell.com
 Associate Presentation Editor Michelle Gourd, michelleg@pennwell.com
 Statistics Editor Laura Bell, laurab@ojonline.com
 Illustrators Mike Reeder, Kay Wayne
 Editorial Assistant Donna Barnett, donnab@ojonline.com
 Production Director Charlie Cole

London

Tel +44 (0)20.8884.4246
 International Editor Uchenna Izundu, uchennai@pennwell.com

Washington

Tel 703.533.1552
 Washington Editor Nick Snow, nicks@pennwell.com

Los Angeles

Tel 310.595.5657
 Oil Diplomacy Editor Eric Watkins, hippalus@yahoo.com

OGJ News

Please submit press releases via e-mail to: news@ojonline.com

Subscriber Service

P.O. Box 2002, Tulsa OK 74101
 Tel 1.800.633.1656 / 918.831.9423 / Fax 918.831.9482
 E-mail ogjsub@pennwell.com
 Circulation Manager Tommie Grigg, tommieg@pennwell.com

PennWell Corporate Headquarters

1421 S. Sheridan Rd., Tulsa, OK 74112



P.C. Lauinger, 1900-1988
 Chairman Frank T. Lauinger
 President/Chief Executive Officer Robert F. Biolchini



Member Audit Bureau of Circulations & American Business Media

Copyright 2009 by PennWell Corporation (Registered in U.S. Patent & Trademark Office). All rights reserved. Oil & Gas Journal or any part thereof may not be reproduced, stored in a retrieval system, or transcribed in any form or by any means, electronic or mechanical, including photocopying and recording, without the prior written permission of the Editor. Permission, however, is granted for employees of corporations licensed under the Annual Authorization Service offered by the Copyright Clearance Center Inc. (CCC), 222 Rosewood Drive, Danvers, Mass. 01923, or by calling CCC's Customer Relations Department at 978-750-8400 prior to copying. Requests for bulk orders should be addressed to the Editor: **Oil & Gas Journal (ISSN 0030-1388)** is published 47 times per year by PennWell Corporation, 1421 S. Sheridan Rd., Tulsa, Okla., Box 1260, 74101. Periodicals postage paid at Tulsa, Okla., and at additional mailing offices. Oil & Gas Journal and OGJ are registered trademarks of PennWell Corporation. **POSTMASTER:** send address changes, letters about subscription service, or subscription orders to P.O. Box 3497, Northbrook, IL 60065, or telephone (800) 633-1656. Change of address notices should be sent promptly with old as well as new address and with ZIP code or postal zone. Allow 30 days for change of address. Oil & Gas Journal is available for electronic retrieval on Oil & Gas Journal Online (www.ojonline.com) or the NEXIS® Service, Box 933, Dayton, Ohio 45401, (937) 865-6800. **SUBSCRIPTION RATES** in the US: 1 yr. \$89; Latin America and Canada: 1 yr. \$94; Russia and republics of the former USSR, 1 yr. 2,200 rubles; all other countries: 1 yr. \$129, 1 yr. premium digital \$59 worldwide. These rates apply only to individuals holding responsible positions in the petroleum industry. Single copies are \$10 each except for 100th Anniversary issue which is \$20. Publisher reserves the right to refuse non-qualified subscriptions. Oil & Gas Journal is available on the Internet at <http://www.ojonline.com>. (Vol. 107, No. 32) Printed in the US. GST No. 126813153. Publications Mail Agreement Number 602914. Return Undeliverable Canadian Addresses to: P.O. Box 1632, Windsor, ON N9A 7C9.



© 2009 Fluor. All Rights Reserved. FLUOR and Fluor Offshore Solutions are registered service marks of Fluor Corporation.

FLUOR OFFSHORE SOLUTIONSSM

Build Big

When our client wanted conceptual and detailed engineering for the largest FPSO topsides in the world—they called Fluor. However, our involvement on China's largest offshore oil field development project did not end there. Fluor also provided procurement and construction services that aided on-time delivery of first oil at Bohai Bay.

When companies need the expertise and skills to achieve timely first oil & gas, they seek Fluor Offshore Solutions. To learn more visit our website at www.fluor.com/offshore.

FLUOR[®]

OGJ
Newsletter

Aug. 24, 2009

International news for oil and gas professionals
For up-to-the-minute news, visit www.ogjonline.com**General Interest — Quick Takes****Venture dismisses Centrica's final offer deadline**

Venture Production PLC again rejected the £1.3 billion cash takeover bid from Centrica Ltd., despite a deadline extension to Aug. 28 to buy shares in the company.

Venture said the offer undervalued the company and urged shareholders not to sign any documentation relating to Centrica's deal. It called on Centrica to offer a "fair price" for its unique portfolio in the UK North Sea.

Centrica received valid acceptances representing 40.8% of the issued share capital of Venture. It has shown an interest in the company for months and has obtained 29.9% of it.

A report compiled by Resource Investment Strategy Consultants pegged Venture's worth at 1,066-1,385 pence/share, much more than the 845 pence/share submitted by Centrica.

But Centrica dismissed the report commissioned by Venture, arguing it was highly optimistic and lacked credibility. "The offer represents a compelling opportunity for Venture shareholders to realize the value of their shares in cash at a time of continued economic uncertainty and market volatility," it added.

Venture also insisted it has the "financial strength" and technical expertise to implement its projects in the UK North Sea.

The European Commission is reviewing the merger process and is to be finished by Aug. 26. Centrica said it believes "no material antitrust issues are likely to arise in relation to the offer."

Thailand's PTTEP reduces 2009 budget

Thailand's PTT Exploration & Production PLC (PTTEP) has cut its 2009 capital expenditures by 12%, or 16 billion baht (\$470.58 million), to 120 billion baht to cope with the economic slowdown.

As a result, it reduced the number of wells to be drilled worldwide this year to 35 from 44, according to PTTEP Chief Executive Anon Sirisaengtaksin.

However, the company aims to maintain its targeted 2009 petroleum sales volume at 240,000 boe/d, and even in the "worst case" scenario does not expect the rate to miss the target by more than 3%, he said. PTTEP had sales of 232,957 boe/d in the second quarter.

The majority state-owned firm expects to boost its worldwide production by 25% over the next 4 years to 300,000 boe/d with incremental output coming from new fields, both domestic and international.

About 70-75% of the production would come from domestic fields and the rest from elsewhere.

PTTEP posted a second-quarter net profit of 6.5 billion baht, or 1.96 baht/share, down from 12.9 billion baht a year earlier, but up from 5.75 billion baht in the previous quarter.

Santos sells down Bonaparte gas fields

Santos has sold 60% of its interests in the Petrel, Tern, and Frigate gas fields in the Bonaparte Gulf straddling the Western Australian and Northern Territory offshore border to GDF Suez for \$200 million.

Santos previously held 100% interest in the fields. GDF Suez will gain operatorship in 2011.

The two companies also have formed a joint venture called Bonaparte LNG to develop the fields via a floating LNG facility capable of producing 2 million tonnes/year of LNG as well as market the gas. GDF Suez will lift all the LNG production and ship it to the Asia-Pacific region.

GDF Suez will carry Santos's share of pre-FEED and FEED costs and make an additional payment to Santos of \$170 million once a final investment decision is reached.

The deal is conditional on Australian Foreign Investment Review Board approval.

Contingent reserves in the fields total 220 million boe, although much of this is dry gas with estimated reserves of 1.5 tcf.

The fields were discovered by ARCO about 30-40 years ago—Petrel with a spectacular blow-out and rig fire in 1969, Tern in 1971, and Frigate in 1978. Santos drilled Frigate Deep-1 to confirm that discovery in 2008.

They lie 250-300 km west of Darwin.

Numerous plans for their development over the years, usually via a pipeline to shore, have never eventuated partly because of the low liquids content and hence lack of an additional revenue stream.

This deal represents GDF Suez's first entry into Australia's petroleum exploration and production business.

Delphi to buy Alberta properties, infrastructure

Delphi Energy Corp., Calgary, announced earlier this month it will buy some natural gas properties in the Gold Creek and Wapiti areas of northwest Alberta for \$11.8 million (Can.). These properties are between Delphi's Hythe and Bigstone properties.

Delphi also said it will dispose of 40% of the acquired working interest in the properties to an unnamed third party following close of the acquisition at the end of this month.

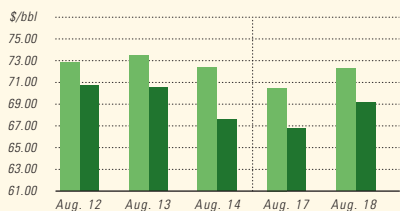
The purchase brings with it the following:

- Incremental production of 400 boe/d, consisting of 77% natural gas and 23% oil and NGLs, and proven-plus-probable reserves effective May 31 of more than 1.4 million boe.
- Ownership in three natural gas processing plants with combined throughput capacity of 720 MMcfd, 10 compressor stations, and 393 km of gathering and transportation pipelines. The gas

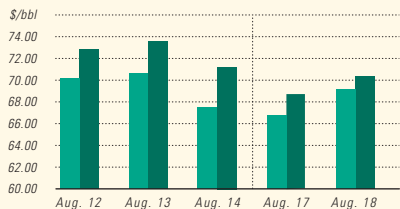
Industry Scoreboard

US INDUSTRY SCOREBOARD — 8/24

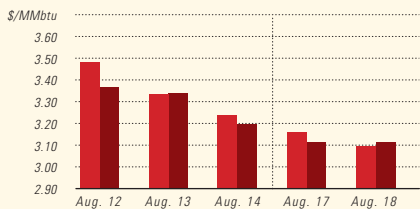
IPE BRENT / NYMEX LIGHT SWEET CRUDE



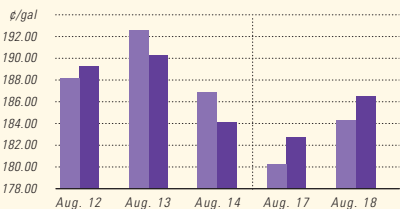
WTI CUSHING / BRENT SPOT



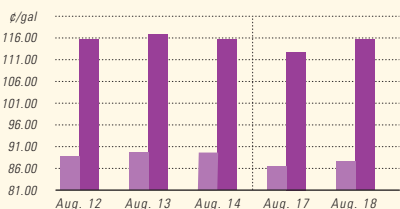
NYMEX NATURAL GAS / SPOT GAS - HENRY HUB



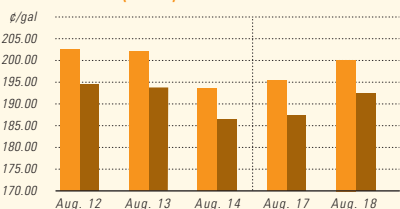
IPE GAS OIL / NYMEX HEATING OIL



PROPANE - MT. BELVIEU / BUTANE - MT. BELVIEU



NYMEX GASOLINE (RBOB)¹ / NY SPOT GASOLINE²



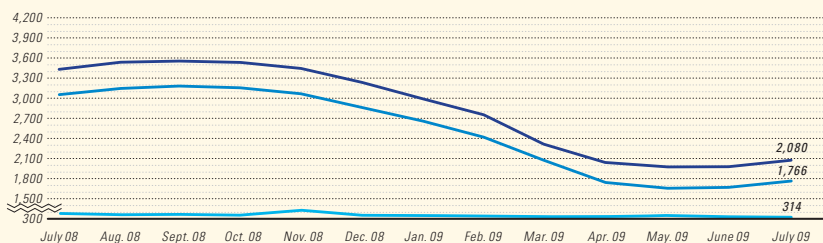
¹Reformulated gasoline blendstock for oxygen blending.
²Nonoxygenated regular unleaded.

Latest week 8/7	4 wk. average	4 wk. avg. year ago ¹	Change, %	YTD average ¹	YTD avg. year ago ¹	Change, %
<i>Demand, 1,000 b/d</i>						
Motor gasoline	9,144	9,147	0.0	8,969	9,056	-1.0
Distillate	3,336	3,682	-9.4	3,600	4,006	-10.1
Jet fuel	1,388	1,588	-12.6	1,382	1,586	-12.9
Residual	488	647	-24.6	598	648	-7.7
Other products	4,549	4,432	2.6	4,093	4,538	-9.8
TOTAL DEMAND	18,905	19,496	-3.0	18,642	19,834	-6.0
<i>Supply, 1,000 b/d</i>						
Crude production	5,175	5,082	1.8	5,232	5,111	2.4
NGL production ²	2,025	2,232	-9.3	1,940	2,145	-9.6
Crude imports	9,511	10,153	-6.3	9,314	9,859	-5.5
Product imports	2,470	2,949	-16.2	2,806	3,194	-12.1
Other supply ³	1,827	1,523	20.0	1,715	1,547	10.9
TOTAL SUPPLY	21,008	21,939	-4.2	21,007	21,856	-3.9
<i>Refining, 1,000 b/d</i>						
Crude runs to stills	14,451	15,303	-5.6	14,451	14,936	-3.2
Input to crude stills	14,813	15,564	-4.8	14,813	15,276	-3.0
% utilization	83.9	88.4	—	83.9	86.8	—

Latest week 8/7	Latest week	Previous week ¹	Change	Same week year ago ¹	Change	Change, %
<i>Stocks, 1,000 bbl</i>						
Crude oil	352,029	349,510	2,519	296,547	55,482	18.7
Motor gasoline	211,931	212,858	-927	202,822	9,109	4.5
Distillate	162,267	161,481	786	131,587	30,680	23.3
Jet fuel-kerosine	46,443	46,613	-170	40,786	5,657	13.9
Residual	34,614	33,588	1,026	36,435	-1,821	-5.0
<i>Stock cover (days)⁴</i>						
			Change, %			Change, %
Crude	24.2	23.7	2.1	19.7	22.8	
Motor gasoline	23.2	23.1	0.4	21.5	7.9	
Distillate	48.6	47.6	2.1	31.3	55.3	
Propane	73.5	76.0	-3.3	48.4	51.9	
<i>Futures prices⁵ 8/14</i>						
			Change		Change	%
Light sweet crude (\$/bbl)	69.65	71.57	-1.92	118.88	-49.23	-41.4
Natural gas, \$/MMBtu	3.45	3.90	-0.45	8.61	-5.16	-60.0

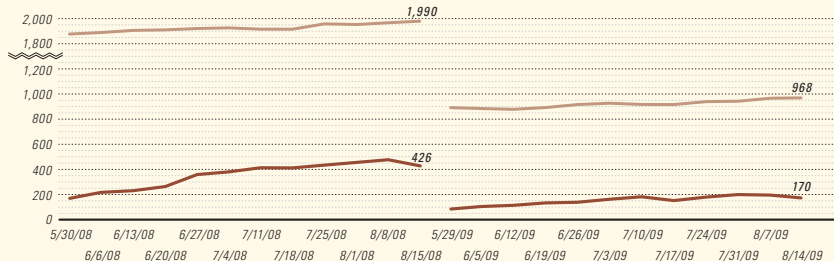
¹Based on revised figures. ²Includes adjustments for fuel ethanol and motor gasoline blending components. ³Includes other hydrocarbons and alcohol, refinery processing gain, and unaccounted for crude oil. ⁴Stocks divided by average daily product supplied for the prior 4 weeks. ⁵Weekly average of daily closing futures prices.
 Sources: Energy Information Administration, Wall Street Journal

BAKER HUGHES INTERNATIONAL RIG COUNT: TOTAL WORLD / TOTAL ONSHORE / TOTAL OFFSHORE



Note: Monthly average count

BAKER HUGHES RIG COUNT: US / CANADA



Note: End of week average count

Do more

exploring collaborating

project leading technology leading industry leading

subsurface subsea subanywhere smiling geosteering

globe-trekking horizontal drilling ecothinking biking

creative thinking stress reducing playing family bonding

rock sampling rock climbing **relaxing on the weekends**

team building carbon capturing pushing the envelope

groundbreaking digital mapping remote sensing

mud logging well logging caring for our environment

life balancing parenting softball playing soccer playing

initiative grabbing challenging yourself

here.

Do more with your career. Do more with your life. Right here in Houston at one energy company that believes we should be able to play as hard as we work. DoMoreHere.com

StatoilHydro

© 2009 StatoilHydro. An equal opportunity employer.

plants are the Devon Wapiti Deep Cut gas plant, Devon Wapiti Shallow Cut gas plant, and BP's South Wapiti gas plant.

• Reserves and production-acquisition costs, excluding about \$1 million allocated to undeveloped land. ♦

Exploration & Development — Quick Takes

BLM seeks comments on Colorado project

The US Bureau of Land Management is seeking public comments on an oil and natural gas development proposal on federal leases near Silt, Colo., BLM's field office in Glenwood Springs announced.

It said on Aug. 18 that Bill Barrett Corp. submitted a master development plan for the Gibson Gulch area with plans to drill as many as 136 new wells from 10 proposed well pads over 5 years, starting this fall.

The proposed development area covers 2,700 acres, 1,867 of which are federal surface and minerals, 40 of which are private surface and federal minerals, and 793 acres are private surface and minerals, according to the BLM field office. County Roads 311 and 335 would provide primary access, it indicated.

The Denver independent's proposal calls for construction of 4.2 miles of access roads and 4.3 miles of pipelines, the BLM field office said. Most of the wells would use directional drilling technology, it added.

BLM plans to prepare an environmental assessment of the plan and would like to hear any specific issues, concerns, and comments the public would like to see addressed in it by Sept. 18, the field office said.

MMS changes term of some geophysical data

The US Minerals Management Service published a final rule that enables producers to request extensions to the length of time the agency treats their data as proprietary.

Currently the US Department of the Interior agency treats seismic and other data collected through permitted geophysical operations as proprietary for 25 years. The new rule, which was published in the Aug. 13 Federal Register and goes into effect Sept. 14, will allow companies to request a 5-year extension under certain conditions. "This new rule will encourage companies to reprocess old data using new technology and modeling systems to gain a better understanding of the resources available on the Outer Continental Shelf," said Chris Oynes, MMS associate director for offshore energy and minerals management. The new rule was designed to allow producers sufficient time to market geophysical information that might not have been reprocessed otherwise, he explained.

"The opportunity to apply for an extension to the proprietary term provides greater potential for a company to realize the commercial benefits of the data they've analyzed," Oynes said. "Because the companies are required to share the data with the MMS, it also will give us a better understanding of available resources and will enable us to make more informed decisions regarding offshore energy development."

Maramzai-1 in Pakistan shows gas, condensate

Hungary's MOL Pakistan Oil & Gas Co. reported a discovery with the Maramzai-1 exploratory well on Tal Block in North West Frontier Province of Pakistan, saying it tested 12 MMcfd of natural

gas and 430 b/d of condensate.

MOL serves as operator for the consortium holding interest in the block. Its partners are Oil & Gas Development Co. Ltd., Pakistan Petroleum Ltd., Pakistan Oilfields Ltd., and Government Holdings (Pvt.) Ltd.

The well, which was drilled to the Lockhart limestone formation, flowed from the uppermost reservoir section. Drilling continues to penetrate and test the potentially prospective lower zones.

The full extent of the discovery will be known once the well reaches the planned total depth during the next few months.

Beach makes oil find in Eromanga basin

Beach Petroleum NL, Adelaide, and its joint venture partner, Drillsearch Energy Ltd., Sydney, have made an oil discovery in permit PEL91 in the South Australian part of the Eromanga basin.

The Chiton-1 wildcat well found a 5.5-m oil interval in the primary Mesozoic-age Namur sandstone target.

It is the first oil discovery in the permit and, although at a P50 estimate of 120,000 bbl of reserves, it is relatively close to existing infrastructure and will be completed for future production.

Chiton-1 is the first of two wells planned in PEL91 along the oil fairway on the western flank of the Patchawarra Trough, which has seen recent discoveries in adjoining permits PELs 92 and 104.

The Chiton discovery significantly reduces the risk of oil charge for other prospects in the block and provides extra confidence for the programs to come.

The second well in PEL91 will be Marino-1 about 8 km north of Chiton, also with a Namur sandstone target.

Bowleven plans appraisal wells in Cameroon

Bowleven PLC plans to drill the IF-2 and IF-3 appraisal wells on IF field within the Etinde permit in Cameroon by second quarter 2010.

The field lies on Block 7 and is estimated to hold 53 million bbl of contingent resources, according to a report by TRACS International Consultancy Ltd. Bowleven also will reprocess 3D seismic and acquire 100 sq km of 3D seismic over the IE and IF discoveries.

Bowleven would use a spread-moored floating, production, storage, and offloading vessel to bring the field on stream if the appraisal is successful. First oil could be produced in 2012 through four production wells, (two of which will be completed appraisal wells) and 3 injector wells. Each production well could deliver 10,000 b/d and injectors 15,000 b/d.

The first phase of the field's development would cost an estimated \$106 million. The second phase involves a fuel gas line to Limbe with onshore processing facilities, which will have a capacity of 60,000 b/d of liquids, a water injection capacity of 60,000 b/d, and a gas capacity of 36 MMscfd. The cost of the second phase would hit \$209 million.

The work will be done in partnership with its new farm-in part-

Do you see a leaf?
We also see a challenge to convert waste
into new resources.

No single entity is responsible for environmental protection. Our industries, communities and environmental service providers must all work together. As a world reference in waste management, Veolia Environmental Services focuses on a sustainable future by treating more than 68 million tons of waste annually and converting it into raw materials, energy and recycled goods.

The environment is our universal challenge.



VE
LISTED
NYSE

Learn more about the innovative material reuse solutions we implemented for Autoliv, Inc.

| veolianorthamerica.com

ner, Vitol E&P Ltd., Geneva, which will contribute \$100 million towards the work program that is expected to finish in 2011. Under a farm-in agreement signed Aug. 13, Vitol will acquire a 25% interest from Bowleven, reducing its share to 75%. This is subject to approval from the Cameroon government and Bowleven's shareholders. If the go-ahead is given, it will become effective from July 1.

According to the farm-in agreement, Vitol also has the option to gain another 25% interest by Sept. 30, 2010, in return for funding

an additional \$100 million gross work program and paying \$25 million in cash to the group to progress Etinde activities. If Vitol exercises the option, it will assume operatorship of the permit and Bowleven will become its technical partner with a 50% interest.

The Etinde permit covers three shallow water blocks off Cameroon, spanning parts of the Rio Del Rey and Douala basins, both of which have proven petroleum systems and discovered hydrocarbon resources. ♦

Drilling & Production — Quick Takes

Chevron advances Minas chemical flood

Chevron Pacific Indonesia is moving ahead with its pilot chemical injection project in giant Minas oil field in Sumatra, Indonesia (OGJ, Apr. 21, 2008, p. 41).

The company let contract to Technip for detail engineering, project management, procurement assistance, and construction management for water treatment and cooling facilities and a polymer and surfactant mixing plant, including chemical injection packages and production facilities.

Chevron began chemical injection last year. It hopes the project will boost recovery at Minas and surrounding fields. The Minas resource has been estimated at 4 billion bbl of oil initially in place.

Production increase planned for Bongkot field

The consortium led by Thailand's PTT Exploration & Production PLC (PTTEP) is set to ramp up production from its greater Bongkot field off Thailand by 58% to 870 MMcfd of gas in the next 2-3 years. The incremental delivery of 320 MMcfd will come from the major sister field in the Gulf of Thailand, Bongkot South, which is slated to come on stream between mid-2012 and mid-2013, behind the previous schedule of 2011.

The Bongkot partnership recently finalized an agreement to sell Bongkot South gas to PTT PLC, Thailand's biggest energy firm. PTTEP operates Bongkot with a 44.4445% share with France's Total E&P and BG Group holding 33.3333% and 22.2222%, respectively.

The main Bongkot field 600 km south of Bangkok has been in production since July 1993 and at its peak in 2007 produced an average of 629 MMcfd of gas and 17,870 b/d of condensate, more than the 550 MMcfd contractual rate agreed with PTT.

Maersk Oil starts production from Affleck

Maersk Oil UK Ltd. has brought Affleck field on stream in the central UK North Sea, adding potentially 8,000 b/d of oil to its portfolio when it reaches full capacity.

The field was originally scheduled to start production in July 2007, but was delayed due to the Janice floating production unit (FPU) had two lengthy shutdown periods after being given prohibitive orders by safety watchdog Health & Safety Executive.

A company spokesman told OGJ that it had initially started at 2,000 b/d through two subsea horizontal production wells tied back via a 28-km production flow line to the Janice FPU on Block 30/17a, also operated by Maersk Oil.

The Affleck subsea manifold, umbilical, and control systems could utilize up to four production wells for future upside potential. Hydrocarbons are being produced from a chalk formation and Maersk Oil used the Noble TVL rig to complete development drilling.

Maersk constructed a new gas export spurline to the Clyde platform, which is operated by partner Talisman North Sea Ltd. "We have also undertaken a significant modification program on Janice to process and export Affleck production fluids, said Tom Van Leenen, Maersk Oil managing director. "In addition Clyde has also undergone topside modifications," he said.

Affleck was first discovered by Royal Dutch Shell PLC in 1974. Oil is being exported through the existing Janice pipeline into Norpipe, and then to Teeside. Gas is being routed through existing ties on the Janice and Judy export pipeline to SEGAL, via the Clyde and Fulmar facilities, and onward to the St. Fergus terminal. ♦

Processing — Quick Takes

Pemex settles on new refinery site

Mexico's Petroleos Mexicanos (Pemex) said it has settled on a site at Tula in Hidalgo state to construct a \$9-billion refinery, and will modernize another facility at Salamanca in nearby Guanajuato state for \$3 billion.

According to Pemex Chief Executive Officer Jesus Reyes Heróles, Hidalgo was the first of the two states to acquire the 700 hectares the firm needed for the refinery, ending a contest between the two over which would host the new facility.

The contest began shortly after mid-April when Pemex announced plans to build the refinery in Tula while simultaneously carrying out a reconfiguration of the Salamanca refinery in Guanajuato state (OGJ Online, Apr. 16, 2009).

But Hidalgo failed to produce the needed 700 hectares within 100 days of the original announcement, and Pemex then said the new refinery would go to whichever state acquired the land first, while the other state would have its existing refinery reconfigured.

According to Heróles, the Hidalgo government was the first of the two states to complete "all the necessary requirements to guarantee legal certainty on land ownership that the state company requires."

The 300,000 b/d facility to be built in Tula is expected to come on stream in 2015, while the expansion of the Guanajuato facility will be ready by yearend 2014.

Reyes said it will cost \$673 million less for Pemex to build the

refinery in Tula than in Salamanca, largely because of lower costs for pipelines and transport.

"The crude for the new refinery, which comes from the south of the country, will (travel a shorter distance to reach) Tula, and therefore the amount to be invested in pipelines and transport will be less," he said.

Detailing figures, Reyes said that a total of \$859 million will be invested in pipelines for the Tula refinery, compared with \$1.28 billion if the Salamanca site had been chosen.

Reyes said Tula was chosen also because it can use 70,000 b/d of residual fuels produced at existing refineries in the area, compared with just 50,000 b/d at the Guanajuato facility.

Biodiesel plant starts up at Finland refinery

Neste Oil Corp. began operating its second plant to produce renewable diesel in late July at the company's main refinery at Porvoo, Finland. The new plant can produce 170,000 tonnes/year of NExBTL renewable diesel. It uses a proprietary technology that converts bio-based inputs into a fuel that closely resembles fossil diesel in chemical composition.

Neste Oil commissioned its first 170,000 tpy NExBTL plant, also in Porvoo, in summer 2007 and is building two worldscale plants in Singapore and Rotterdam capable of producing 800,000 tpy each. They are due to be completed in 2010 and 2011, respectively. Neste Oil has refineries in Porvoo and Naantali with combined refining capacity of about 260,000 b/d. In 2008, according to the company, it had net sales of €15 billion. ♦

Transportation — Quick Takes

PNSC updates oil tanker fleet

Pakistan National Shipping Corp. (PNSC) has short-listed two Japanese-built oil tankers for acquisition at a cost of \$60 million.

PNSC said it could make the acquisitions after the finance ministry gave permission to convert its rupees into dollars.

The two vessels with twin-hulls are anchored off Turkey and Spain. One was built in 1997 and the other in 2003. PNSC declined to identify the vessels further. The company will proceed with the bidding process following successful completion of inspections.

The proposed acquisitions are part of PNSC's plan to update its ageing tanker fleet. Except the recently acquired M/T Quetta oil tanker, built in 2005, its other vessels have an average age of 28 years. Pakistan currently has three oil tankers, of which only the M/T Quetta has a twin-hull. The other two, M/T Swat and M/T Jauhar, will not be seaworthy after the 2011 deadline imposed by the International Maritime Organization for retiring single-hull tankers, officials said.

ExxonMobil secures Gorgon-Jansz LNG contract

ExxonMobil Corp. has secured another customer to complete its share of LNG from the Gorgon-Jansz project by signing up PetroChina for a 20-year supply deal.

ExxonMobil will supply the Chinese company with 2.25 million tonnes/year of LNG for 20 years. The deal is worth an estimated \$50 billion (Aus.) and comes on the heels of last week's finalization of an agreement to supply Petronet of India with 2 million tpy from Gorgon-Jansz (OGJ Online, Aug. 12, 2009).

The project has now received environmental approval from the Western Australian government for the three-train 15 million tpy liquefaction plant to be constructed on Barrow Island and is expecting word on the federal government's environmental stance by early September. If this is positive the way will be clear for the Chevron Australia-led joint venture to make its final investment decision on the development within the next few months.

Origin, ConocoPhillips choose CSM-LNG site

The Australia Pacific LNG joint venture of Origin Energy Ltd., Sydney, and ConocoPhillips's Australian arm in Perth chose Laird Point on Curtis Island near Gladstone in Queensland as the site of

its proposed LNG plant. The plant will be fed by coalseam methane from the Surat and Bowen basins. The 50-50 JV secured the 230-hectare site from the Queensland government. The LNG project is scheduled to sell its first shipment to international markets in 2014.

The companies say the project will create 10,300 jobs during the construction period with 18,600 direct and indirect jobs created nationally during the peak years from 2012-15. The JV intends to lodge its environmental impact statement for the project early next year with a final investment decision timed for the end of 2010.

Overall plans are to develop the JV's vast CSM reserves base into a 14-16 million tonne/year LNG plant at the Curtis Island site.

Petrobras gets license for LNG terminal

Brazil's Petroleo Brasileiro SA (Petrobras) has received an operating license for its 14 cu m/day LNG regasification terminal at Guanabara Bay in Rio de Janeiro state.

Rio de Janeiro's Environmental Institute Inea issued the license, which also includes approval for a pipeline connecting the terminal and the future compression station in Campos Eliseos, also in Guanabara Bay.

The license, which will be valid until July 29, 2014, enables Petrobras subsidiary Transportadora Associada de Gas SA to operate the facility—Brazil's second after Pecem Port in Ceara state.

Petrobras's Golar Spirit floating regasification plant concluded initial tests at Guanabara Bay in April, with deliveries made via pipeline to two gas-fired power plants in southeast Brazil.

Testing at Guanabara Bay started on Mar. 26, with regasified LNG delivered to the two gas-fired power plants which generated average daily output of 435 Mw and 215 Mw, respectively.

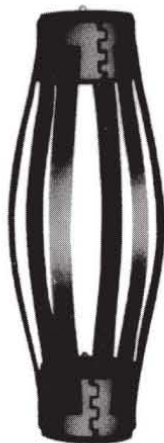
Petrobras last year completed construction and testing of the terminal at Pecem, which has installed capacity to produce 7 million cu m/day of gas. Last month, Royal Dutch Shell PLC delivered the first LNG to Petrobras, supplying 135,000 cu m to the Pecem terminal under an agreement signed in 2008.

In May, Maria das Gracias Silva Foster, Petrobras gas and energy director, said the firm plans to complete the construction of its third LNG terminal by January 2013, adding that its capacity could reach 20 million cu m/day of gas. ♦

Everything for Oilwell Cementing

Everything but the Cement!

HINGE-TYPE CENTRALIZERS



Industrial Rubber's Hinge-Type Centralizers feature channel-formed collar rings with hinges placed within the channel to eliminate hinge damage. This construction assures that hinges will not rupture while casing is being run regardless of hole direction or irregularities in formations and that the centralizer will provide effective centering down hole.

The design of the split collars and narrow bow springs provide maximum effective centralizing of the casing with minimum obstruction to annular flow. Industrial Rubber Hinge-Type Centralizers are available in sizes 2 3/8" through 20".



Regular Float Shoe

Automatic Fill-up
Float Shoe

FLOAT EQUIPMENT

Regular Ball-Type Flapper Type Automatic Fill-up

Industrial Rubber's three types of float shoes and float collars are engineered for rugged dependability. Drillable parts are made from high strength aluminum alloy formulated for ease of drilling. All three types of float equipment are designed to provide adequate flow passage and to withstand the abrasive action of large volumes of fluids. Write or call for details on rugged and dependable float equipment from Industrial Rubber, Inc.

WRITE FOR NEW CATALOG

EVERYTHING FOR OILWELL CEMENTING.

Plugs, casing centralizers, baskets, float equipment, stage cementing tools,
EVERYTHING BUT THE CEMENT.

CALL TOLL-FREE 800-457-4851 FOR PRICE AND DELIVERY

PRIVATELY OWNED - ESTABLISHED IN 1965

Now accepting
MasterCard and VISA

OIL TOOL DIVISION

P. O. Box 95389 Oklahoma City, Ok. 73143-5389

Phone 405/632-9783

Fax 405/634-9637

Visit our website at www.iri-oiltool.com

C a l e n d a r

♦ Denotes new listing or a change in previously published information.

OIL & GAS JOURNAL —online—

Additional information on upcoming seminars and conferences is available through OJ Online, Oil & Gas Journal's Internet-based electronic information source at <http://www.ogjonline.com>.

2009

AUGUST

IADC Well Control Conference of the Americas & Exhibition, Denver, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 25-26.

Summer NAPE, Houston, (817) 847-7700, (817) 847-7704 (fax), e-mail: info@napeexpo.com, website: www.napeonline.com. 27-28.

SEPTEMBER

Oil & Gas Maintenance Technology North America Conference, New Orleans, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.ogmnta.com. 1-3.

Coal-Gen Europe Conference, Katowice, Poland, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.coal-gen-europe.com. 1-4.

EAGE Near Surface European Meeting, Dublin, +31 88 995 5055, +31 30 6343524 (fax), e-mail: eage@eage.org, website: www.eage.org. 7-9.

IAEE European Conference, Vienna, (216) 464-5365, e-mail: iaee@iaee.org, website: www.iaee.org. 7-10.

Offshore Europe Conference, Aberdeen, +44 (0) 20 7299 3300, e-mail: nbradbury@

spe.org, website: www.offshore-europe.co.uk. 8-11.

GPA Rocky Mountain Annual Meeting, Denver, (918) 493-3872, (918) 493-3875 (fax), e-mail: pmirkin@gpaglobal.org, website: www.gpaglobal.org. 9.

♦GITA's GIS Annual Oil & Gas Conference, Houston, (303) 337-0513, (303) 337-1001 (fax), e-mail: info@gita.org, website: www.gita.org/oilgas. 13-17.

Turbomachinery Symposium, Houston, (979) 845-7417, (979) 847-9500 (fax), e-mail: inquiry@turbo-lab.tamu.edu, website: <http://turbo-lab.tamu.edu>. 14-17.

Annual IPLOCA Convention, San Francisco, +41 22 306 02 30, +41 22 306 02 39 (fax), e-mail: info@iploca.com, website: www.iploca.com. 14-18.

Polar Petroleum Potential 3P Conference, Moscow, (918) 584-2555, (918) 560-2665 (fax), website: www.aapq.org. 16-18.

Drilling Engineering Association-Europe: ERD and Associated Technology Meeting, Stavanger, +44 (0) 1483-598000, e-mail: Dawn. Dukes@otmnet.com, website: www.dea-europe.com. 17-18.

Annual Energy Policy Conference, Oklahoma City, (202) 580-6532, (202) 580-6559 (fax), e-mail: info@energyadvocates.org, website: www.energyadvocates.org. 20-22.

NPRA Environmental Conference, Denver, (202) 457-0480, (202) 457-0486 (fax), website: www.npra.org. 21-22.

Multiphase User Roundtable-Mexico, Villahermosa, (979) 268-8959, (979) 268-8718 (fax), e-mail: Heather@petroleumetc.com, website: www.mur-mexico.org. 22-23.

IADC Drilling HSE Europe Conference & Exhibition, Amsterdam, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 23-24.

SPE Eastern Regional Meeting, Charleston, W.Va., (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 23-25.

ERTC Sustainable Refining Conference, Brussels, 44 1737 365100, +44 1737 365101 (fax), e-mail: events@gtforum.com, website: www.gtforum.com. 28-30.

DGMK Production and Use of Light Olefins Conference, Dresden, 040 639004 0, 040 639004 50, website: www.dgmk.de. 28-30.

IADC Advanced Rig Technology Conference, Houston, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 29.

Unconventional Gas International Conference & Exhibition, Fort Worth, Tex., (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.unconventional-gas.net. Sept. 29-Oct. 1.

ERTC Biofuels+ Conference, Brussels, 44 1737 365100, +44 1737 365101 (fax), e-mail: events@gtforum.com, website: www.gtforum.com. Sept. 30-Oct. 2.

OCTOBER

Interstate Oil and Gas Compact Commission Annual Meeting (IOGCC), Biloxi, Miss., (405) 525-3556, (405) 525-3592 (fax), e-mail: iogcc@iogcc.state.ok.us, website: www.iogcc.state.ok.us. 4-6.

SPE Annual Technical Conference and Exhibition, New Orleans, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 4-7.

World Gas Conference, Buenos Aires, +54 11 5252 9801, e-mail: registration@wgc2009.com, website: www.wgc2009.com. 5-9.

ISA EXPO, Houston, (919) 549-8411, (919) 549-8288 (fax), e-mail: info@isa.org, website: www.isa.org. 6-8.

Kazakhstan International Oil & Gas Exhibition & Conference (KIOGE), Almaty, +44 (0) 207 596 5233, +44 (0) 207 596 5106 (fax), e-mail: oilgas@ite-exhibitions.com, website: www.oilgas-events.com. 6-9.

Power-Gen Asia Conference, Bangkok, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.powergenasia.com. 7-9.

Renewable Energy World Asia Conference & Expo, Bangkok, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.renewableenergy-world-asia.com. 7-9.

NPRA Q&A and Technology Forum, Ft. Worth, Tex., (202) 457-0480, (202) 457-0486 (fax), e-mail: info@nptra.org, website: www.nptra.org. 11-14.

API Fall Petroleum Measurement Standards Meeting, Calgary, Alta., (202) 682-8000, (202) 682-8222 (fax), website: www.api.org. 12-15.

GPA Houston Annual Meeting, Houston, (918) 493-3872, (918) 493-3875 (fax), e-mail: pmirkin@gpaglobal.org, website: www.gpaglobal.org. 13.

Expandable Technology Forum, Houston, +44 (0) 1483 598000, e-mail: sally.marriage@otmnet.com, website: www.expandableforum.com. 14-15.

International Oil & Gas Exploration, Production & Refining Exhibition, Jakarta, +44 (0)20 7840 2100, +44 (0)20 7840 2111 (fax), e-mail: ogiti@oesallworld.com,

website: www.allworldexhibitions.com. 14-17.

SPE/EAGE Reservoir Characterization and Simulation Conference and Exhibition, Abu Dhabi, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 18-21.

GSA Annual Meeting, Portland, (303) 357-1000, (303) 357-1070 (fax), e-mail: meetings@geosociety.org, website: www.geosociety.org. 18-21.

Oil Shale Symposium, Golden, Colo., (303) 384-2235, e-mail: jboack@mines.edu, website: www.mines.edu/outreach/cont_ed/oilshale/. 19-23.

Oil and Gas Transportation in the CIS and Caspian Region Annual Meeting, Moscow, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. 20-22.

SEG International Exposition and Annual Meeting, Houston, (918) 497-5500, (918) 497-5557 (fax), e-mail: register@seg.org, website: www.seg.org. 25-30.

SPE/IADC Middle East Drilling Conference & Exhibition, Manama, +971 4 390 3540, +971 4 366 4648 (fax), e-mail: spedal@spe.org, website: www.spe.org. 26-28.

PICT-Passive Inflow Control Technology Meeting, Copenhagen, +44 (0) 1483-598000, e-mail:

Dawn.Dukes@otmnet.com, website: www.inflowcontrol.com. 27-28.

Louisiana Gulf Coast Oil Exposition (LAGCOE), Lafayette, (337) 235-4055, (337) 237-1030 (fax), e-mail: lynette@lagcoe.com, website: www.lagcoe.com. 27-29.

North African Oil and Gas Summit, Tunis, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. 27-29.

Offshore Middle East Conference & Exhibition, Manama, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.offshoremiddleeast.com. 27-29.

Advanced Ceramics Outperform Other Materials

Ceradyne advanced ceramic components have demonstrated 20 years of leading performance in harsh oil and gas environments.

- Superior wear and corrosion resistance
- 80% lighter than carbide
- Electrically insulating
- Thermal shock resistant
- Engineered to complex shapes



ceradyne, inc.
ADVANCED TECHNICAL CERAMICS
Engineered Ceramic Specialists

(800) 839-2189
info@ceradyne.com
www.ceradyne.com

C a l e n d a r

NOVEMBER

Deep Offshore Technology International Conference & Exhibition, Monte Carlo, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.deepoffshoretechnology.com. 3-5.

IPAA Annual Meeting, New Orleans, (202) 857-4722, (202) 857-4799 (fax), website: www.ipaa.org. 4-6.

GPA North Texas Annual Meeting, Dallas, (918) 493-3872, (918) 493-3875 (fax), e-mail: pmirkin@gpaglobal.org, website: www.gpaglobal.org. 5.

Capture and Geological Storage of CO₂ Symposium, Paris, +33 1 47 52 67 21, +33

1 47 52 70 96 (fax), e-mail: patricia.fulgoni@ifp.fr, website: www.CO2symposium.com. 5-6.

Sulphur International Conference and Exhibition, Vancouver, +44 20 7903 2058, +44 20 7903 2172 (fax), e-mail: cruuevents@crugroup.com, website: www.sulphurconference.com. 8-11.

Gas Turbine Users International (GTUI) Annual Conference, Calgary, Alta., +9714 804 7738, +9714 804 7764 (fax), e-mail: info@gtui.org, website: www.gtui.org. 8-13.

IADC Annual Meeting, Miami, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 9-10.

Multiphase User Roundtable-South America, Rio de Janeiro, (979) 268-8959, (979) 268-8718 (fax), e-mail: Heather@petroleumetc.com, website: www.mur-sa.org. 9-10.

API Fall Refining and Equipment Standards Meeting, Dallas, (202) 682-8000, (202) 682-8222 (fax), website: www.api.org/events. 9-11.

Digital E&P Event, Houston, (646) 200-7444, (212) 885-2733 (fax), e-mail: cambrosio@wbresearch.com, website: www.digitaleandp.com. 9-11.

NPRA/API Operating Practices Symposium, Dallas, (202) 457-0480, (202) 457-0486 (fax), website: www.npra.org. 10.

Petroleum Association of Wyoming (PAW) Annual Oil & Gas Statewide Reclamation Conference, Casper, (307) 234-5333, (307) 266-2189 (fax), e-mail: cheryl@pawyo.org, website: www.pawyo.org. 10.

Deepwater Operations Conference & Exhibition, Galveston, Tex., (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.deepwateroperations.com. 10-12.

SPE International Oil and Gas China Conference & Exhibition, Beijing, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 10-12.

NPRA International Lubricants & Waxes Meeting, Houston, (202) 457-0480, (202) 457-0486 (fax), website: www.npra.org. 12-13.

ASME International Mechanical Engineering Congress and Exposition (IMECE), Lake Buena Vista, Fla., (973) 882-1170, (973) 882-1717 (fax), e-mail: infocentral@asme.org, website: www.asme.org. 13-19.

PIRA Natural Gas Markets Conference, New York, (212) 686-6808, (212) 686-6628 (fax), e-mail: sales@pira.com, website: www.pira.com. 14-15.

IADC Completions Conference, Houston, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 17.

Houston Energy Financial Forum, Houston, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.accessanalyst.net. 17-19.

IADC Well Control Asia Pacific Conference & Exhibition, Bangkok, (713) 292-1945, (713) 292-1946 (fax), e-mail: conferences@iadc.org, website: www.iadc.org. 18-19.

DECEMBER

Refining and Petrochemicals in Russia and the CIS Countries Annual Meeting, Amsterdam, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. 1-3.

World LNG Summit, Barcelona, +44 (0) 20 7978 0000, +44 (0) 20 7978 0099 (fax), e-mail: info@thecwcgroup.com, website: www.thecwcgroup.com. 1-4.

European Drilling Engineering Association Expandables, Multilaterals and Technologies Meeting, Vienna, +44 (0) 1483-598000, e-mail: Dukes@otmnet.com, website: www.dea-europe.com. 3-4.

Nuclear Power International Conference, Las Vegas, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.nuclearpowerinternational.com. 8.

Emerging Unconventional Resources Conference & Exhibition, Shreveport, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.emergingresourcesconference.com. 8-10.

Power-Gen International Conference, Las Vegas, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.power-gen.com. 8-10.

PIRA Understanding Natural Gas and LNG Markets Seminar, New York, (212) 686-6808, (212) 686-6628

(fax), website: www.pira.com. 14-15.

PIRA Understanding Global Oil Markets Seminar, New York, (212) 686-6808, (212) 686-6628 (fax), website: www.pira.com. 16-17.

2010

JANUARY

Plant Maintenance in the Middle East & Annual Meeting, Abu Dhabi, +44 (0) 1242 529 090, +44 (0) 1242 529 060 (fax), e-mail: wra@theenergyexchange.co.uk, website: www.wraconferences.com. 10-13.

Oil & Gas Maintenance Technology Conference & Exhibition Co-located with Pipeline Rehabilitation and Maintenance, Manama, Bahrain, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.oilandgas-maintenance.com. 18-20.

Pipeline Rehabilitation & Maintenance Co-located with Oil & Gas Maintenance Technology, Manama, Bahrain, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.pipeline-rehab.com. 18-20.

World Future Energy Summit, Abu Dhabi, +971 2 4090 445, +971 2 444 3768 (fax), e-mail: ludoiva.sarram@reedexpo.ae, website: www.worldfutureenergysummit.com. 18-21.

SPE Oil and Gas India Conference and Exhibition, Mumbai, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 20-22.



We put our drives through the most grueling tests imaginable. And then things got really bad.

In 2005 Hurricane Katrina battered the Gulf, unleashing a relentless torrent on the platform. The equipment room that housed TMEIC GE's Dura-Bilt5i™ Medium Voltage drives was flooded and abandoned.

When engineers reopened the platform in 2006, the Dura-Bilt5i drives started up without incident. While it was an extraordinary situation, it underscores the reliability of our drives, even in the world's most demanding environments, conditions, and climates.

The world is a tough place. That's why you need a tough drive.



TMEIC GE

We drive industry

metals | cranes | paper | oil & gas | utilities | cement | mining | rubber & plastics

www.tmeicge.com • Phone: +1-540-283-2300
1325 Electric Road • Roanoke, VA 24018 USA

◆SPE Deep Gas Conference, Manama, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 24-27.

API Exploration and Production Winter Standards Meeting, New Orleans, (202) 682-8000, (202) 682-8222, website: www.api.org. 25-29.

Health, Safety, Environment & Training Conference & Exhibition, Houston, (713) 292 1945, (713) 292 1946 (fax), e-mail: info@iadc.org, website: www.iadc.org. 26-27.

The European Gas Conference and Annual Meeting, Vienna, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. 26-28.

◆API/AGA Joint Committee on Oil and Gas Pipeline Welding Practices Conference, New Orleans, (202) 682-8000, (202) 682-8222 (fax), website: www.api.org. 27-29.

Annual Gas Arabia Summit, Abu Dhabi, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. Jan. 31- Feb. 3.

◆International Process Analytical Technology Forum (IFPAC), Baltimore, (847) 543-6800, (847) 548-1811 (fax), e-mail: info@ifpacnet.org, website: www.ifpacnet.org. Jan 31-Feb 4.

FEBRUARY

Deep Offshore Technology International Conference & Exhibition, Houston, (713) 963-6271, (713) 963-

6296 (fax), e-mail: registration@pennwell.com, website: www.dotinternational.net. 2-4.

IADC/SPE Drilling Conference and Exhibition, New Orleans, (713) 292 1945, (713) 292 1946 (fax), e-mail: info@iadc.org, website: www.iadc.org. 2-4.

Russia Offshore Annual Meeting, Moscow, +44 (0) 20 7067 1800, +44 (0) 20 7242 2673 (fax), website: www.theenergyexchange.co.uk. 2-4.

◆Global Petrochemicals Conference & Annual Meeting, Vienna, Austria, +44 (0) 1242 529 090, +44 (0) 1242 529 060 (fax), e-mail: wra@theenergyexchange.co.uk, website: www.wraconferences.com. Feb 9-11.

SPE International Symposium & Exhibition of Formation Damage Control, Lafayette, (972) 952-9393, (972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 10-12.

◆NAPE Expo, Houston, (817) 847-7701, (817) 847-7703 (fax), e-mail: info@napeexpo.com, website: www.napeonline.com. Feb 11-12.

Annual Petroleum Coke Conference, Seattle, (832) 351-7828, (832) 351-7887 (fax), e-mail: petcoke.conference@jacobs.com, website: www.petcokes.com. 12-13.

SPE North Africa Technical Conference & Exhibition, Cairo, (972) 952-9393,

(972) 952-9435 (fax), e-mail: spedal@spe.org, website: www.spe.org. 14-17.

◆Pipeline Pigging & Integrity Management Conference & Exhibition, Houston, (713) 521-5929, (713) 521-9255 (fax), e-mail: clarion@clarion.org, website: www.clarion.org. 16-18.

◆Pipe Line Contractors Association Annual Conference (PLCA), Scottsdale, Ariz. (214) 969-2700, e-mail: plca@plca.org, website: www.plca.org. 17-21.

Laurance Reid Conditioning Conference, Norman, Okla., (512) 970-5019, (512) 233-2877 (fax), e-mail: bettyk@ou.edu, website: www.lrgcc.org. 21-24.

◆International Petrochemicals Technology Conference & Exhibition, Madrid, +44 (0) 20 7357 8394, +44 (0) 20 7357 8395 (fax), e-mail: enquiries@europetro.com, website: www.europetro.com. 22-23.

Photovoltaics World Conference & Exhibition, Austin, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@penntel.com, website: www.Photovoltaicsworldevent.com. 23-25.

Renewable Energy World North America Conference & Expo, Austin, (918) 831-9160, (918) 831-9161 (fax), e-mail: registration@pennwell.com, website: www.renewableenergyworld-events.com. 23-25.



DIRECTORATE GENERAL OF HYDROCARBONS (Under Ministry of Petroleum & Natural Gas)

Expression of Interest (EOI) for Integrated Geoscientific Studies of East Coast, India

Directorate General of Hydrocarbons (DGH), Noida invites Expression of Interest from capable and experienced R&D institutions/E&P companies for carrying out detailed G&G studies of five sedimentary basins (Bengal, Mahanadi, Krishna Godavari, Pallar & Cauvery) along East Coast of India, covering both onland and offshore extensions. These include basins where presence of hydrocarbons have been discovered/proved and where good, moderate and sparse quantum of geoscientific data is available.

The scope of work includes:

1. Study of available maps, reports pertaining to geology, structure, tectonics and petroleum system in the basin.
2. Study of available well data, geophysical data litho logs, petrophysical, geochemical, temperature, porosity / permeability, pressure and heat flow data.
3. Seismic interpretation on a regional scale from the available seismic data.
4. Construction of geological/tectonic model.
5. Evolutionary history of the basin.
6. Preparation of Palaeogeography maps, Paleotectonic analysis and Seismo Geological sections.
7. Identification and analysis of Petroleum system, intra and inter basins.
8. Determining hydrocarbon prospectively of the interpreted Formations.
9. Genetic classification/nomenclature of basins considering its lateral extent in a vertical time scale.

Interested parties capable of carrying out the above mentioned study may please respond by **31st August, 2009** to the address given below along with the following documents:

1. Organization profile and set up with resume of personnel proposed for the study.
2. Plan with details for executing scope of work.
3. Software/hardware available for the study.
4. Write-up on similar projects executed.
5. Details of participating organization in case of consortium.
6. Balance sheets of last two years.

DGH reserves the right to accept or reject an offer from any party without assigning any reason whatsoever.

The envelop shall be superscribed with Expression of Interest for "Integrated studies along East Coast" and may address to:

Advisor (MM)

Directorate General of Hydrocarbons

C-139, Sector - 63, NOIDA - 201301, U.P. (INDIA) Phone: +91-120-4029400, Fax: +91-120-4029410

J o u r n a l l y S p e a k i n g

Industry safety record improving

Leena Kootungal
Survey Editor/News
Writer

While researching health and safety information on the American Petroleum Institute's web site, this editor found an annual survey of nonfatal injuries and illnesses in the workplace. According to API's Workplace Safety Report, the number of oil and natural gas industry job-related nonfatal injuries and illnesses has decreased. In 1998 the number of nonfatal injuries and illnesses was 4.4 per 100 fulltime workers. In 2007, that statistic decreased to 3 per 100 fulltime workers.

This report compares the rates of job-related nonfatal injuries and illnesses within the US oil and gas industry with comparable US industries. The oil and gas industry's safety record has consistently improved, reflecting its commitment to health and safety.

Personal protective equipment

As part of the commitment to improving the safety of the industry, Red Wing Shoe Co. announced in May the expansion of its existing line of work-wear garments to include a complete offering of personal protective equipment for the global oil and gas industry. Red Wing has designed a full line of work boots specifically for oil and gas workers.

The leather is oil-tanned, which presaturates it and prevents it from absorbing contaminants encountered at drilling sites. It also makes it long-lasting. The leathers also resist many caustic materials, which can cause work boots to break down prematurely.

Red Wing soles are also rated for resistance to oil and gas based upon the

"oil swell" test. This test measures the percentage of how much a sole swells when submerged in oil (the less swell the better). This ensures that the sole isn't absorbing too much oil and gas, resulting in excessive wear.

Training, safety programs

Meanwhile, Petrofac Training became the first training provider to be approved by The Oil and Gas Academy to deliver the new Minimum Industry Safety Training, or MIST, course. The MIST course has been designed to introduce the fundamental safety elements of the offshore oil and gas industry to new starts. The course was developed in line with Step Change in Safety's goal to make the UK the safest oil and gas E&P province in the world by 2010.

The course features nine modules, which include understanding the risk assessment process, tasks that require permit to work, controlling the use of hazardous substances offshore, knowledge and practices of working at height, and awareness of mechanical lifting activities.

Many oil and gas companies have safety programs. ExxonMobil Corp.'s safety program is called "Nobody gets hurt." ExxonMobil leads the industry with low incident rates for work-related injuries and illnesses. Since 2000, ExxonMobil has reduced workforce lost-time incident rate by an average of over 12%/year.

Employees and contractors receive rigorous training before commencing work in ExxonMobil's facilities. They participate in safety teams, conduct safety observations, and suggest ongoing improvements in safety procedures. In 2008, more than 1,600 of the company's contractor supervisors and managers participated in leadership workshops conducted by ExxonMobil Development Co., an increase of more than 20% since 2007.

ExxonMobil is working toward a goal of zero safety and health incidents. By using specially tailored tools and techniques, including ergonomics, the number of accidents and cases of illness at work can be reduced. Many ExxonMobil organizations have reduced injuries through behavior-based safety tools incorporated in their personnel safety management systems.

Human factors, such as fatigue, influence people's performance and behavior. According to ExxonMobil, the most effective way to incorporate human factors into equipment and systems set-up is at the initial facility design and development stage. By involving operating personnel and considering the principles of human factors early in a project's development, it reduces costly rework and performs smoother startups with lower incident frequency.

Compliance

In June, the US Occupational Safety and Health Administration sent letters to refinery managers emphasizing the need to comply with all applicable OSHA standards, particularly the Process Safety Management of Highly Hazardous Chemicals.

OSHA sent letters to the management of more than 100 refineries. The letters outlined compliance issues found under OSHA's Refinery National Emphasis Program and urged refiners to comply with their obligations under the process safety management standard. The standard requires employers to develop and incorporate comprehensive, site-specific safety management systems to reduce the risks of fatal or catastrophic incidents.

"We initiated this NEP to ensure that refineries develop and fully implement a safety management system that protects workers from serious incidents," said acting Assistant Secretary of Labor for OSHA Jordan Barab. ♦



ATLANTIC COUNCIL

The Atlantic Council of the United States, with the support of the **Romanian Ministry of Foreign Affairs** and the **Ministry of Economy**, announces the *inaugural*

BLACK SEA | Energy & Economic Forum 2009

Bucharest, Romania • September 30 – October 2, 2009

Keynote Addresses:

Traian Basescu, President of Romania

Steven Chu, U.S. Secretary of Energy*

Cristian Diaconescu, Romanian Minister of Foreign Affairs

Mircea Geoana, Romanian President of the Senate

Chuck Hagel, Chairman of the Atlantic Council of the United States

Richard Morningstar, U.S. Special Envoy for Eurasian Energy

Daniel Poneman, Deputy Secretary and Chief Operating Officer, U.S. Department of Energy*

Adriean Videanu, Romanian Minister of Economy

Featuring:

Executive Roundtable

Our Global Energy Future

Panelists include global energy company Chief Executives from *BOTAS, Eni, ExxonMobil, Gazprom Export, Hellenic Petroleum, KazMunaiGas, Lukoil, OMV, Rompetrol, Sabanci, Schlumberger, Shell, SOCAR, TPAO, Uzbekneftegaz* and others

Ministers Roundtable

Policy Responses to Global Energy Challenges

Panelists include Energy Ministers from *Armenia, Azerbaijan, Bulgaria, Egypt, Georgia, Greece, Iraq, Kazakhstan, Moldova, Qatar, Russia, Sweden, Turkey, Turkmenistan, Ukraine, the United States and Uzbekistan*

*to be confirmed

REGISTER NOW

Visit www.acus.org to download registration materials and view the Forum agenda.

Please contact Sarah Frese at sfrese@acus.org for more information.

E d i t o r i a l

Unsound energy thinking

Tax torpedoed in the budget proposed by US President Barack Obama have vital significance to the oil and gas industry regardless of their political fate. They indicate how the administration thinks about energy in general and oil and gas in particular. In a word, the administration's thinking on these subjects is unsound.

A new study by the Energy Policy Research Foundation Inc. (EPRINC), Washington, DC, challenges the rationale offered by the Treasury Department for tax changes that would hurt small producers and major companies alike. In fact, EPRINC says, the changes would have costly effects directly opposed to the administration's assertions.

The proposal

As proposed, the budget would hammer small producers by repealing tax preferences that boost cash flow and encourage drilling investment, such as percentage depletion. It would raid larger producers with measures such as a new levy on Gulf of Mexico production and fees on nonproducing federal leases. And it would hit refiners with reinstatement of Superfund taxes, repeal of last-in first-out inventory accounting, and exclusion from the manufacturer's tax deduction ("Sect. 199") available to other US industries. From the administration's year-by-year estimates in budget documents, EPRINC calculates the average cost to the industry of tax code changes in the proposal at \$3.263 billion/year.

The Treasury Department says current tax provisions, by generating investment it deems excessive in oil and gas production, is "detrimental to long-term energy security" and "inconsistent with the administration's policy of reducing carbon and encouraging the use of renewable energy sources through a cap-and-trade program (OGJ, June 1, 2009, p. 18)." EPRINC points out that tax changes that lowered production would yield compensating increases in oil imports, a development not usually thought to be a boon to security.

A shift from domestically produced to imported oil also can be expected to raise emissions of greenhouse gases because of the long-haul transportation required by much imported oil, the study says. Compounding that disadvantage would be the extent to which gas production cuts induced by the tax changes limited the displace-

ment of coal by the lighter hydrocarbon in power generation.

Beyond the security and environmental drawbacks, a rise in imports would aggravate US fiscal problems. EPRINC cites a 2006 study by the Oak Ridge National Laboratory estimating the cost of imported oil to the US economy, beyond the market price, at \$13.58/bbl in 2004 dollars. In 2009 dollars, the cost is \$14.70/bbl. At that level, according to the study, the US would sustain economic losses exceeding expected increases in federal receipts when production declines resulting from the heavier tax load exceeded 160,000 b/d. The estimated economic cost doesn't account for drops in receipts by the Treasury, states, and localities.

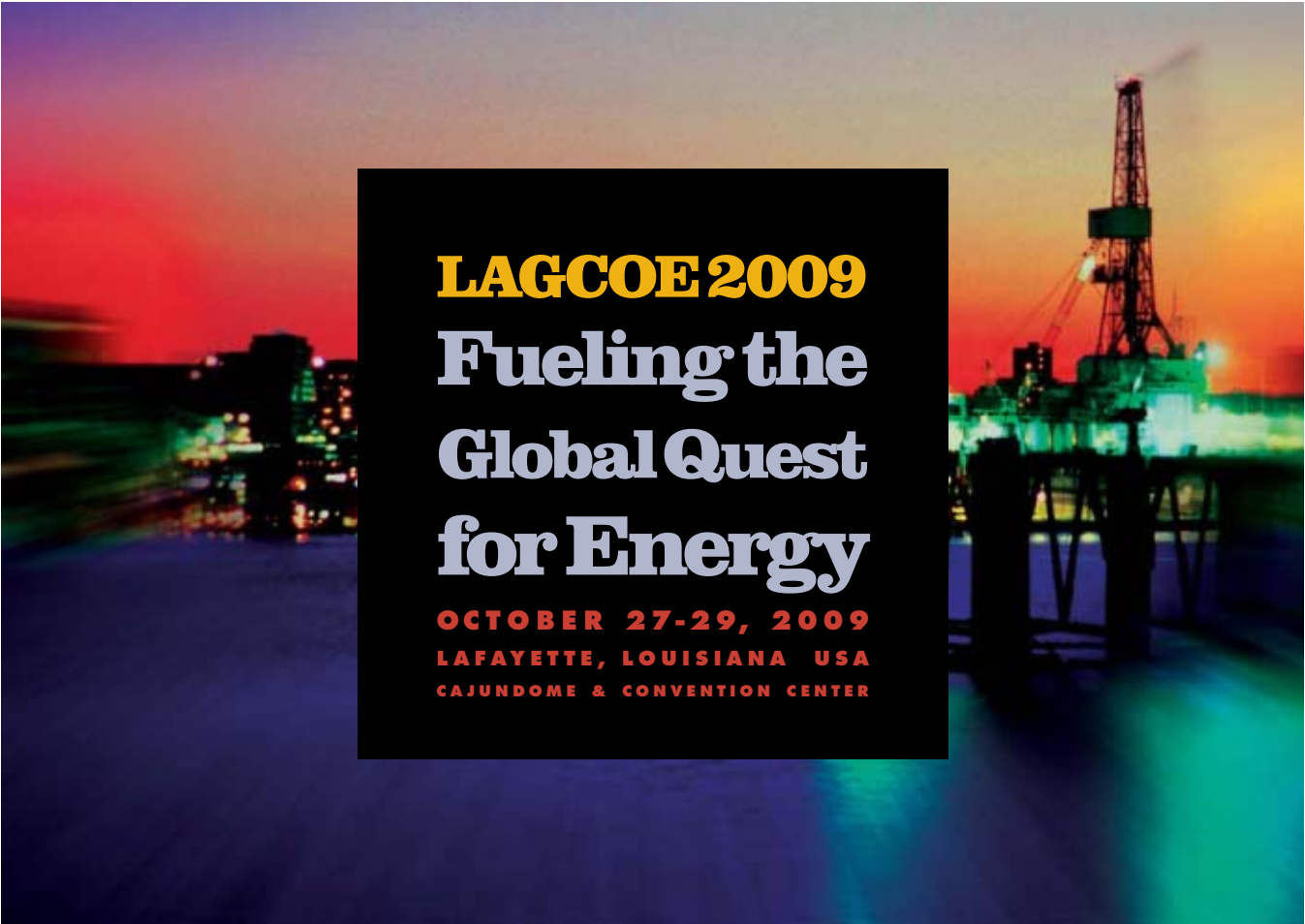
A production hit of that size isn't difficult to imagine. EPRINC estimates the tax changes would lower long-term investment by large companies in US exploration and production by 3%. And it points out that 2006 production from US stripper wells, the category most sensitive to cuts in cash flow from existing operations, was 915,000 b/d.

For US refiners, the tax proposals would hurt competitiveness in a market increasingly supplied by imported products, especially gasoline. "Foreign refiners are so entrenched in the domestic gasoline market that they are directly linked in a competitive battle for a share of the US products market in which relatively small shifts in cost advantage can bring about large changes in product flows," EPRINC says.

Real possibilities

Diminished security. Increased emissions of greenhouse gases. Net economic losses. Hampered ability of an important manufacturing industry to compete in its home market. These can't be outcomes the administration had in mind when it proposed its first federal budget. They are very real possibilities, however, which must be taken seriously.

For now, oil and gas elements of the budget proposal seem to have stalled in Congress, which has other distractions, including unwieldy legislation on energy and climate change with its own arsenal of economic bombs. But the thinking that produced the budget proposal remains at work. For oil and gas companies, therefore, the threat endures. ♦



LAGCOE 2009
Fueling the
Global Quest
for Energy

OCTOBER 27-29, 2009
LAFAYETTE, LOUISIANA USA
CAJUNDOME & CONVENTION CENTER

WHY LAGCOE? ACCESS. OPPORTUNITY.
EXPERIENCE. GROWTH. KNOWLEDGE. AND
THAT'S JUST ON YOUR FIRST DAY.

Register to Attend the 2nd Largest Energy Exposition in the United States - LAGCOE:
Louisiana Gulf Coast Oil Exposition - at www.LAGCOE.com



LAGCOE

Louisiana Gulf Coast Oil Exposition

Fueling the Global Quest for Energy

OCTOBER 27-29, 2009 | LAFAYETTE, LOUISIANA USA | LAGCOE.com

GENERAL INTEREST

International upstream: a 5-year roller coaster

Graham Kellas
Wood Mackenzie
London

International agreements

Relationships between oil and gas companies and host-country governments have come under strain. This article examines pressures resulting from recent gyrations in the price of crude oil. Following it, on Sept. 7 and Sept. 14, will be a two-part look at the evolution of international petroleum agreements.

Investors in the upstream oil and gas industry have been on a roller coaster ride for the past 5 years, with prices reaching dizzying heights and then plummeting. The latest twist on the roller coaster leaves operators with a cost base and tax rates reflecting a price environment that seems to have disappeared. Consequently, company profits are evaporating, and there is huge pressure on future investment plans.

Governments of oil-producing countries are hurting, too. With the oil price dropping (and operators' costs increasing), governments' tax margins have been squeezed dramatically. Some governments have reduced their projected levels of oil revenue, impacting the budgets that they established during the previous fiscal year.

With the added shadow of global credit restriction, governments and investors face tough decisions as they prepare for the next twists on the roller coaster. Which fiscal measures are governments likely to consider in dealing with the unexpected dip in their oil revenues? What impacts are these measures likely to have on investor and government revenues? And which fiscal regimes are most likely to produce a more stable outlook for governments and investors alike during the present downturn and beyond?

No surprise

Increases in tax rates as oil profits soar might not be welcomed by investors, but they can hardly come as a surprise. Investors would also expect tax rates to come back down when prices fall to encourage investment and maintain production levels.

There has been some evidence of governments, notably that of Russia, beginning to reduce the tax burden, and there is a growing expectation that more will follow with time. The questions investors are asking are when will tax rates fall, and by how much?

Several countries recently introduced windfall taxes that were constructed in

such a way that tax rates reduce automatically when prices fall. These levies are generating much less revenue at current prices (Fig. 1).

Another feature of recent increases in the government take, however, was for governments to target revenues rather than profits by increasing royalty rates, increasing export duties, or lowering cost-recovery ceilings. These measures can raise the percentage of government take from the gross operating margin (Fig. 2).

Following the oil price crash in 1986, many governments responded by reducing or even abolishing royalty rates and other regressive fiscal terms. This response will once again be a focus for investors in discussions with governments during the current downturn. But because royalty is based on revenue rather than profit, some governments may actually be tempted to increase rates rather than reduce them. US Interior Sec. Ken Salazar, for example, has recently announced a review of federal royalty rates, noting that other countries charge higher royalty rates than the current US range of 12.5-18.5%.¹

Another feature of the government response to the mid-1980s price crash was the reconfiguration of several fiscal regimes to make the level of fiscal take more sensitive to project profitability than to revenues. Regimes following this strategy have proven to be quite responsive during recent price increases. But, as the experience of Angola shows, where the government take is linked to a project's rate of return there is no inherent mechanism for reducing high tax rates when prices come down unless the cash flow becomes negative (Fig. 3).

Very high marginal rates applied to greatly reduced margins are likely to discourage operators from continuing to invest in projects and, in extremes, may even make projects uneconomic. Moreover, there is little incentive for operators to reduce costs.²

Start again?

Even where government and investors are aligned in their desire to

change terms to suit the new economic environment, a regime ensconced within a contract will require renegotiation. But contractual instability has been portrayed as anathema by investors in recent years. Countries that changed terms unilaterally were accused of demonstrating the worst kind of investment risk. And some have suffered from reduced investment as a result.

A government's willingness to improve terms sends a more favorable message to investors—apart from those which believe contracts should remain intact even if they were to benefit from a change. In some countries, however, renegotiating contract terms carries an additional element of reputation risk.

With prices high, several countries took advantage of the industry's appetite for prospective acreage by allowing companies to bid for blocks based on fiscal terms. Some of the winning bids in North Africa, in particular, attracted extremely aggressive production-sharing bids. The current environment lowers chances that investors can make an economic return under these terms, creating a major obstacle to investment.

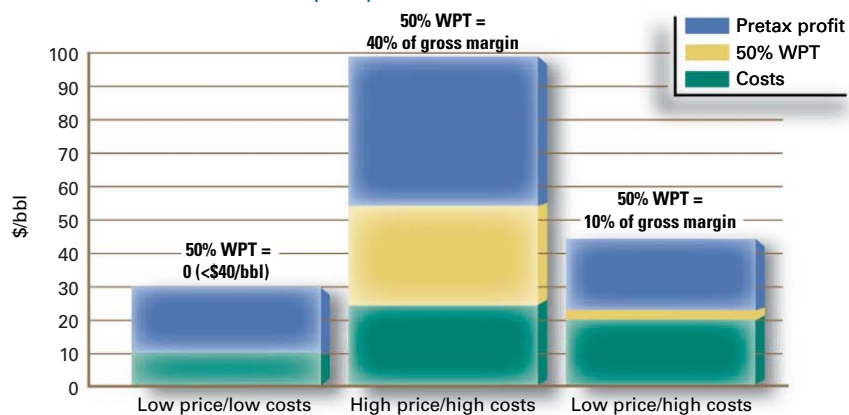
These governments are now caught between a rock and a hard place. Either they agree to reduce the take in the contract—invalidating the auction process at the same time—or they force the contractor to stick to its obligations, which it cannot afford to do. This results in forced relinquishment and retendering, all of which delays investment.

How low?

Governments which are free to reduce tax rates for upstream investors at will—including most countries that belong to the Organization for Economic Cooperation and Development—may decide not to do so. Lower prices are already reducing expected tax revenues from upstream operations. And the general economic downturn is reducing tax revenue from other industries. Where the government is reliant on oil and gas income, this can create budget deficits, forcing governments to reduce commitments to social projects.

IMPACT OF WINDFALL PROFIT TAX (WPT) WITH VOLATILE PRICES AND COSTS*

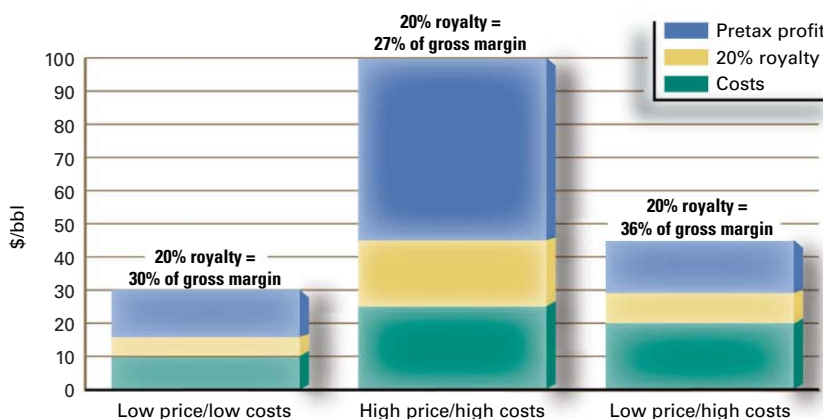
Fig. 1



*Hypothetical example based on a WPT levied at 50% of price above \$40/bbl. Price/full cycle cost combinations assumed to be \$30/bbl (price) /\$10/bbl (costs), \$100/\$25, and \$45/\$20. Source: Wood Mackenzie

IMPACT OF ROYALTY WITH VOLATILE PRICES AND COSTS*

Fig. 2



*Hypothetical example with royalty of 20% of gross revenue under the price/cost relationships in Fig. 1. Source: Wood Mackenzie

Spurred by last year's surge in oil prices, several governments set budgets for 2009 based on prices' remaining relatively high. These budgets are now being heavily revised. For example, Alaska has reduced its 2009 revenue expectations by \$2 billion, resulting in the cancellation of \$1.2 billion of planned savings, a reduction in planned expenditure of \$300 million, and a draw on savings to balance the 2009 budget.³

Alaska is, however, able to draw upon budget surpluses built up over recent years, an ability it shares with several countries that generated budgets based on modest price expectations.

Others have been less prudent. Stories are beginning to emerge of national

oil companies in oil-dependent countries reneging on payments to suppliers and other contractors, resulting in postponed and canceled work. This makes politicians vulnerable, a consequence of which might be that the government will look to the oil industry for more money and actually increase tax rates, despite project economics being on the downward slope.

Governments point out that the most recent oil company accounts show record profits (based on last year's high oil price). They also observe that major oil companies are reporting, on average, ongoing production costs between \$6/boe and \$12/boe.⁴ So they conclude that there is still ample profitability in

GENERAL INTEREST

ANGOLAN DEEPWATER FIELD: CASH FLOW VS. GOVERNMENT PROFIT SHARE*

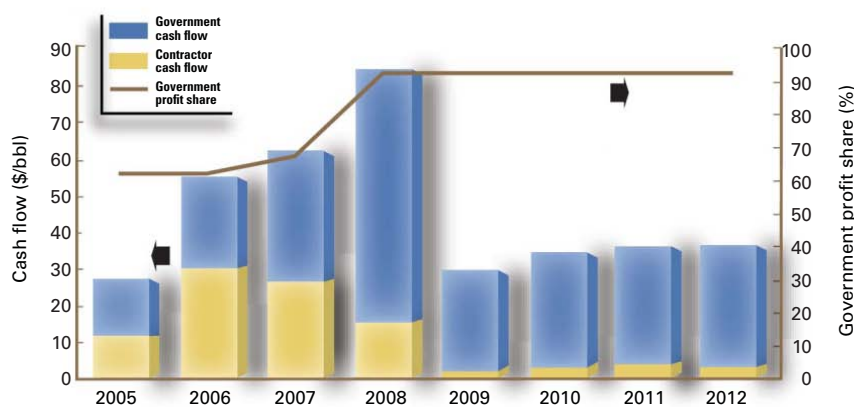


Fig. 3

*Government profit share includes tax. Future price: \$40/bbl.
Source: Wood Mackenzie

WORLDWIDE RIG COUNT

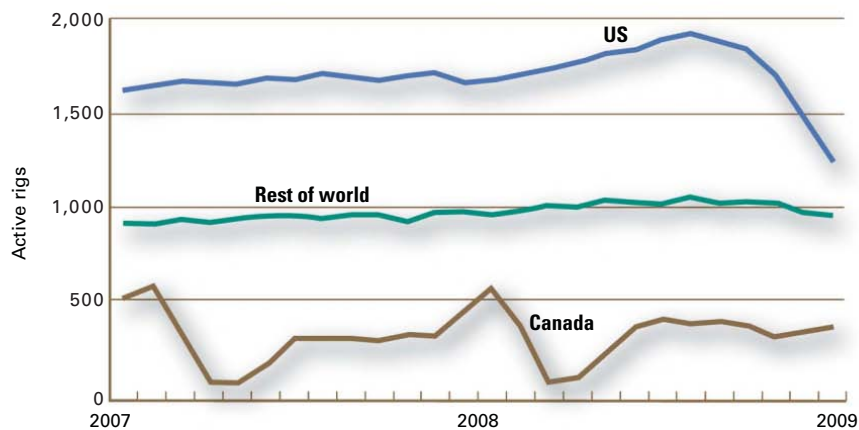


Fig. 4

Source: Baker Hughes

the industry, which thus becomes an easy target for higher taxes.

The recent US budget proposals provide a good example of a government seeking to raise additional tax revenue (\$31 billion) from its upstream industry despite the low-price, high-cost environment. These proposals have been accused of exacerbating already low investor confidence in US activity, which is suffering from the combination of tight credit availability and lower commodity prices. Drilling activity in the US has plunged (Fig. 4).

Targeting existing production profits for additional tax revenue overlooks the need for a large proportion of those profits to be plowed into ongoing

capital expenditure to maintain existing production levels and develop new sources of production. The full-cycle costs of such investment greatly exceed ongoing production costs. For some of the more complex major sources of new production, such as Canadian oil sands and deep water, recent cost increases have pushed the full-cycle costs to near the current oil price, and projects are being postponed as a result. In mature basins, the small size of new fields results in much higher unit capital and operating costs than prevail for legacy assets. Even the lowest-cost countries of the Organization of Petroleum Exporting Countries say they cannot invest at \$40/bbl and late last

year postponed projects, although some revived projects when crude prices returned to \$70/bbl and costs declined.⁵

And that is the crux of the matter: Can governments afford to increase taxes on existing production, gaining short-term revenue but running the risk of reduced investment and reduced revenue in the future? On the other hand, can they afford to reduce taxes now to stimulate investment?

Fiscal twists...

Thus, governments of all oil and gas producing countries face a short-term dilemma with long-term implications: Should they increase or decrease the level of their take? A number of factors influence this discussion:

- Attitude toward investors.
- Perception of industry costs.
- Perception of future opportunities.

If the attitude toward investors is generally favorable and open, governments (such as Indonesia and Norway) which have held fiscal terms stable through the roller coaster's recent upward climb may be expected to remain stable in the downturn. Others, which have demonstrated in the past that they will increase or decrease tax rates as conditions change, might reasonably be expected to undo some of their recent tax increases (such as the UK).

On the other hand, countries that experienced a surge of resource nationalism during the upturn face a quandary. They now have a large stake in many projects which are rapidly losing value and which, in many cases, require substantial additional investment. As the funding of these projects reduces the government's ability to fund social projects, there will be conflicting demands on a thinner purse. Capital investment in oil and gas projects in these countries could dry up, reducing future production levels and allowing the vicious cycle to continue.

In the past, this has resulted in governments' renewing opportunities for the private sector in new investment, ideally including a carry of the state's equity. But a number of major obstacles

stand in the way of this process in the near future:

- Citizens and politicians had just become accustomed to being resource owners and minimizing the role of the private sector. It is too soon to begin to climb down from that position.
- The number of private investors with access to capital to fund the investments has fallen dramatically.
- Those companies that remain well funded will view any opportunities with great caution and anxiety, following the investment instability of recent years.

Thus, inviting the companies back in may not be easy. In fact, some governments have suggested they may even go the other way and nationalize the industry in order to remove completely any remaining private sector profit. But even if governments do decide to work more closely with oil companies, any fiscal incentives that they offer are not guaranteed to generate investment, and

they might be regarded as not worth the paper they're written on if terms have been radically altered in the recent past.

...And turns

Governments are perturbed by the high levels of cost inflation in the industry. While prices were also rising they could mostly live with it, but now that prices are much lower governments' attention is turning to these costs as a source of depriving them of revenue.

A number of moves have been proposed that will cap, reduce, or even disallow certain costs from being recovered from revenue. Thus, tax rates can be left alone, but the tax base is increased along with government revenues. Alaska, for example, introduced a cap on Prudhoe Bay operating expenses in its 2007 tax changes, and the recent US federal tax proposals increase the depreciation period for drilling expenditure.

The message that normally accompanies such proposals is that the oil industry is enjoying certain incentives which are no longer merited. But the industry regards these as necessary to balance the extremely high risks, capital intensity, and long delivery times of oil and gas projects, all of which make them different from big investment projects in other industries.

In addition, oil and gas projects are normally subject to a variety of other fiscal levies that are not applicable to other industries. So any beneficial treatment in the standard tax terms may be viewed in part as compensation for this. Ultimately, however, the main point is that reductions in cost allowances—particularly those related to exploration and development expenditures—will reduce investors' returns and possibly decrease investment.

Some countries are also seeking to reduce cost allowances for tax while taking

Now more than ever it's important to network, learn, and discover
the best geospatial solutions for the oil and gas industry.

Be part of the most influential event for geospatial oil and gas solutions.

Whether you're a veteran user of the technology or are just beginning to explore geographic information systems, this growing event features technical presentations, interactive half-day seminars, an exhibit floor that sold out more than 5 months before show start, power panels, and much more that will take your system to the next level.



Realize Your Geospatial Potential

September 13-17, 2009 • Marriott Westchase Hotel Houston, Texas USA

Register today at gita.org/oilgas!



GENERAL INTEREST

the opportunity to create incentives for local content by restricting deductions to costs incurred outside the country. Nigeria's 2008 Petroleum Industry Bill, for example, proposes the restriction of deductible overseas expenditure to 80% of the total amount spent. Kazakhstan has also proposed updating existing contracts to make purchasing from local suppliers mandatory rather than simply allowing oil companies to purchase locally when they can.

This fiscal targeting of costs adds to operators' need to take back control of the supply chain and reduce costs. The message that operators are sending to suppliers is quite clear: "The price has gone back down to 2004 levels, and so should your rates." But how quickly they can achieve their goal remains to be seen. Many current contracts have been signed on a multiyear basis, based on rates that were at an all-time high. Companies trying to renegotiate or simply renege on these contracts will be guilty of the same charge they have made of some governments in recent years: disregarding the sanctity of contract terms.

Is stability achievable on the fiscal roller coaster?

Any fiscal system needs to cater to a wide array of project economics, from existing production in legacy fields and incremental investment in these fields to maintaining production through to wildcat exploration in frontier areas. Even without a volatile price and cost environment, the range of risk-reward profiles in most countries is vast.

Consequently, trying to apply one set of fiscal rules to all projects is unlikely to succeed, as is any attempt to apply lower or higher taxes across the board.

Governments and investors seeking to achieve stability on the fiscal roller coaster will need a flexible set of terms that acknowledge (a) the government's demand for a high share of profits when economics are robust and (b) the investor's need for incentives to maintain investment in more difficult situations.

Key principles

Some of the key principles that governments should consider when revising fiscal regimes are as follows:

- Tax rates that respond automatically to price changes—such as price-linked windfall levies—are far more likely to create an investment environment without ad hoc fiscal changes than flat tax rates.
- Fiscal terms levied on project profits rather than on revenues are less likely to result in developments being postponed or production being brought to a premature end on marginal fields.
- Focusing fiscal incentives (such as capital allowances) on incremental investment in older, producing fields for tax purposes provides an incentive to continue investing in these legacy assets. Producers which are not reinvesting profits from such production will then be subject to higher effective tax rates than those which are continuing to invest.
- Increasing local content could be helped by adding an uplift allowance to these costs but not by disallowing costs spent overseas, which may be the only source of appropriate equipment.

There are many peaks, troughs, dips, and twists yet to come on the fiscal roller coaster. It remains to be seen which governments will work with investors to keep investment on the track. ♦

RIIA: West has exaggerated fear of Asia over African oil

Eric Watkins
Oil Diplomacy Editor

Western fears about increasing Asian interest in securing African oil resources are highly exaggerated, according to a recent report by the UK's Royal Institute for International Affairs (RIIA).

"In spite of fears expressed in Western capitals about an Asian takeover in

References

1. "US to consider raising oil, gas royalty rates," Reuters, Mar. 24, 2009.
2. See Wood Mackenzie, "Fiscal Storms Perspective," May 2008, and "Cost Hyperinflation Global Insight," July 2006.
3. Governor of Alaska press release No. 09-17, Feb. 3, 2009, (<http://gov.state.ak.us/archive.php?id=1621&type=1>).
4. BP Strategy Presentation, London, Mar. 3, 2009, www.bp.com/liveassets/bp_internet/globalbp/STAGING/global_assets/downloads/I/IC_bp_strategy_presentation_march_2009_slides.pdf.
5. Petroleum Economist, Energy Report, Mar. 18, 2009.

The author

Graham Kellas is vice-president of upstream consulting at Wood Mackenzie. He is a recognized authority in the analysis and design of petroleum fiscal regimes. Kellas has advised several governments and national oil companies on fiscal policy, including, most recently, Newfoundland and Labrador, Nigeria, and The Nigeria-Sao Tome Joint Development Authority. He has also provided consulting advice to many international oil companies on prospect evaluation and fiscal and contract negotiation strategy. At Wood Mackenzie, Kellas has designed and managed several multiclient studies benchmarking global fiscal terms and economics, including "Government Take" (2007) and "Petroleum Fiscal Systems" (due for release later in 2009).



the Nigerian and Angola oil sector, the reality is different," said the RIIA report authors, adding that "these fears were highly exaggerated."

The report noted that the presence of Asian oil and gas companies in Africa is comparatively recent and that in the face of such new competitors, established Western oil majors still "dominate production and hold the

WATCHING THE WORLD

Eric Watkins, Oil Diplomacy Editor

Blog at www.ogonline.com

majority of reserves.”

The report, entitled “Thirst for African Oil,” concludes that neither Nigeria nor Angola fits the stereotype of weak African states being ruthlessly exploited by resource-hungry Asian tigers.

In Nigeria’s case, a cash-hungry political class sought to profit from its Asian partners’ thirst for oil, while in Angola the relationship with China was nurtured in a pragmatic, disciplined way to the mutual advantage of both countries.

The report also compares the experiences of Chinese companies with those of India, South Korea, and Japan and assesses the growing competition between China and India where China’s deeper pockets have put a brake on India’s ambitions.

Some of the report’s other key points include:

- Neither Nigeria nor Angola has relations with Asian countries that fit the stereotype of weak African states being ruthlessly exploited by resource-hungry Asian tigers. In Nigeria’s case, the Asian-tiger stereotype was turned on its head as a cash-hungry political class sought to profit from its Asian partners’ thirst for oil. In Angola, by contrast, the relationship with China was nurtured with care and grew steadily in a pragmatic but disciplined way to the mutual advantage of both countries.

- It is not possible to generalize about the impact of Asian oil companies in Africa, but it is clear that vastly different political cultures and practices have a strong bearing on determining impact and outcomes. While Nigeria was playing politics with its Asian partners, Angola was driven by economic necessity to quickly access funds to finance its post-war recovery. Nigeria simply lacked the imperative. As a result, the oil-for-infrastructure concept worked in Angola but not in Nigeria.

- Many of the general assumptions about Asian involvement in Africa need to be revisited. The failure of the oil-for-infrastructure deals in Nigeria was not due to chicanery by the Asian oil companies but rather to the failure



Corrib project delayed again

Ireland’s oil and gas industry has been out of the news for a while, but its back as disagreement continues in County Mayo over Royal Dutch Shell PLC’s Corrib gas pipeline project.

Irish planning officials were due to release their decision on Aug. 10 concerning Shell’s application to change the route of the onshore section of the Corrib gas pipeline, but they deferred the decision to a later date.

An Bord Pleanla said the complexity of the case had held up the inspector’s report, which is expected to run into hundreds of pages, and that a new date of Oct. 23 has been set for the decision—although it could come sooner.

The announcement came just a day or two ahead of a report by monitoring consultants for Minister for Energy Eamon Ryan that the spillage of a chemical additive and some oil during construction at the Corrib gas landfall had “no ecological impact.”

Spillage reported

For its part, Shell EP Ireland said a full incident report “is being completed” into the accidental spillage of a “mixture of liquids, including corrosion inhibitor dye” at the landfall works site at Glengad on July 29.

The spillage, estimated at 20 l. by EirEco, the Minister’s environmental consultant, and at 15 l. by Shell, flushed into a fully enclosed trench where it mixed with rainwater.

Shell said an environmental response team pumped the liquid out of the trench into sealed containers, which were removed to a waste facil-

ity and that the liquid is biodegradable.

The chemical additive is used as part of hydrotesting of the 83 km offshore pipeline, which has now been laid in full from Glengad out to the manifold at the Corrib gas field.

Protestors jailed

While one accepts the government’s explanation of “complexity” as the reason for delaying its decision over the Corrib line, news of the spillage would not have helped Shell’s cause at all, especially given the jailing of local protestors at the same time.

That came on July 31, when so-called Shell to Sea campaigners Maura Harrington and Niall Harnett were sentenced at Bellmullet District Court to 4 months each in jail for failing to comply with the directions of a garda or policeman.

Harnett was sentenced to an additional 4-month period after assaulting a garda last year at Glengad.

Meanwhile, several other protestors are awaiting sentence, with more than 50 people estimated to have recently come before the courts, or are due to, in connection with the protest campaign.

Shell to Sea spokesman Terrence Conway said, “The increased pressure from the state in support of Shell will not stop opposition to this pipeline. If they get away with this behavior then no community in the country will be safe from such activity.”

There can be little doubt that the protests will continue. We’ll report back when An Bord Pleanla reaches its decision over the line. ♦

GENERAL INTEREST

of the Obasanjo government to manage the scheme. By contrast, Angola has on the whole managed its relationship

with China and its oil companies to its benefit in spite of occasional hiccups along the way. With less of a political

agenda, Angola's version of the oil for infrastructure scheme has been much more successful for both sides. ♦

Egyptians protest sale of natural gas to Israel

Eric Watkins
Oil Diplomacy Editor

The Egyptian-Israeli consortium Egyptian Mediterranean Gas (EMG) has finalized terms of an agreement to supply natural gas to Israel's Dorad Energy, revising an agreement initially struck in 2007.

Under terms of the revised agreement, EMG will supply 12.5–16 billion cu m (bcm) of gas to Dorad Energy over 17–22 years at a reported cost of \$2.1–3.3 billion.

But opposition has mounted to the new agreement in Egypt, with critics saying that the gas is being sold to Israel at prices considerably lower than those found on the international market.

Indeed, Ibrahim Zahran, a member of a coordinated campaign against exports of Egyptian gas to Israel, said the gas is almost as greatly underpriced in the new agreement as it was in the first one.

Zahran said the first agreement called for a price of \$1.25/MMbtu, saying it was about one tenth of the international

market price of \$15/MMbtu.

Zahran said the second agreement is not much better even with the price at \$1.75/MMbtu since international rates remain at \$15/MMbtu. In Zahran's view, such vastly reduced prices mean that Egypt is subsidizing Israeli gas purchases.

Zahran's statements came in response to earlier remarks by Egyptian President Hosni Mubarak, who said after the signing of the new agreement: "Egypt is not selling gas to Israel at reduced prices, as some are claiming."

According to Mubarak, the government "made revisions and amendments of current gas contracts with all countries in order to maximize profit for Egypt."

Other critics are not concerned about the price of the gas, saying on political grounds that Egypt should not be selling anything at all to Israel.

"It is absolutely forbidden that we support a country currently at war with Islam and Muslims, and which occupies the land of Palestine," said

Nasr Farid Wassil, former Grand Mufti of Egypt, who added, "All economic relations with such a country should be severed."

Meanwhile, reports of opposition to the new agreement coincide with word that the joint tenders committee of Israel's National Infrastructure and Finance ministries has issued a prequalifying tender for an offshore LNG receiving terminal at a location yet to be determined.

The committee has set a target date of October 2013 for the start-up of the new terminal, which will have a receiving capacity of 4 bcm/year and will be operated under a 20-30 year build, operate and transfer contract.

The tender specifies that the winning bidder operate and maintain the receiving terminal, as well as provide storage and regasification facilities.

After advancing the startup date of the proposed terminal due to concerns that Israel may soon face a shortfall in gas supplies, the joint tenders committee plans to announce the winning bidder by yearend 2010. ♦

Coalition planning rallies against cap-and-trade program

Nick Snow
Washington Editor

A coalition of more than 100 organizations, including at least 15 oil and gas groups, plans to hold rallies in about 20 states to express concerns about proposed federal clean air legislation before Congress returns from its August recess.

The group's plans, which were initially reported in an Aug. 16 Washington Post article, were contained in an e-mail message from American Petroleum

Institute Pres. Jack N. Gerard to chief executives of API's member companies that environmental organization Greenpeace distributed on Aug. 17.

An API spokeswoman verified that the document was genuine but said that the organization was not sponsoring the effort known as Energy Citizens. "It's a number of organizations including trucking, seniors, farmers, and other groups which agrees that we need affordable energy and we can't lose American jobs," Cathy Landry told OGI.

Gerard's e-mail revealed how seriously the oil and gas industry is taking the possibility that the US might adopt a carbon cap-and-trade program to address global climate change, however. "The objective of these rallies is to put a human face on the impacts of unsound energy policy and to aim a loud message at those states' US senators to avoid the mistakes embodied the House climate bill and the Obama administration's tax increases on our industry," it said.

On June 26 the US House, by a vote of 219 to 212, approved HR 2454, which has such a provision as its centerpiece. Energy and Commerce Committee Chairman Henry A. Waxman (D-Calif.) and Edward J. Markey (D-Mass.), who chairs the committee's Energy and Environment Subcommittee, cosponsored the measure. The US Senate is expected to consider the bill next.

'Move aggressively'

"While such efforts are never easy and the risk of failure is never present, we must move aggressively in preparation for the post-Labor Day debate on energy, climate, and taxes," Gerard said in his e-mail. He noted that API has identified 11 states "with a significant industry presence" and 10 other states "where we have assets on the ground" and that the US Chamber of Commerce, National Association of Manufacturers,

and other nonoil and gas groups had joined the effort.

Other oil and gas associations listed as participants at Energy Citizens' web site include the Independent Petroleum Association of America, the National Petrochemical & Refiners Association, the National Ocean Industries Association, the Permian Basin Petroleum Association, and the Texas Alliance of Energy Producers. Several states' petroleum associations, and oil product marketing and convenience store groups also are involved.

"At the rallies, we will focus our message on two points: the adverse impacts of unsound energy policy (e.g., Waxman-Markey-like legislation, tax increases, and access limitations) on jobs and consumer costs. And we will call on the Senate to oppose unsound energy policy and 'get it right,'" Gerard said in his e-mail.

"It would logically appear that the

'Energy Citizen' campaign's objective is to defeat climate change regulation," Phil Radford, Greenpeace's US executive director, said in an Aug. 12 letter to Gerard. This would be contrary to several prominent API members' public support for climate action, including BP PLC, Royal Dutch Shell PLC, and ConocoPhillips, which are members of the US Climate Action Partnership (USCAP), he added.

"We support the effort. Some organizations say that API is opposed to any kind of climate legislation. That's not true. The opposition is to the House legislation, and anything that looks like it in the Senate because it's hugely discriminatory to transportation fuel consumers and refiners. We support adoption of a bill to reduce greenhouse gas emissions, but in a manner that is transparent, protects jobs, provides affordable energy, and continues to provide for US economic growth," said

Investment Opportunities in the field of Exploration of OIL & GAS

Eighth Bid Round of New Exploration Licensing Policy (NELP-VIII) & Fourth Bid Round of Coal Bed Methane Policy (CBM-IV)

- Revised and attractive bid terms • Opportunities for non E&P companies also
- Weightage to experienced players in Deep Water • Simplified production sharing under CBM

Blocks on Offer

NELP-VIII-70 Blocks

- 10 Onland Type S* • 8 Onland
- 28 Shallow Water • 24 Deep Water
- * Block of 200 Sq. Kms or less

CBM-IV-10 Blocks

Bid closing date : 12.10.2009

Largest ever offering under NELP - VIII

Contact Persons :

Ms Jodie Gillespie Phone : +61 405 913 230 E-mail : j.gillespie@fugro.com
 Mr. V.K. Dewangan E-mail : vk.dewangan@nic.in
 Mr. Anurag Gupta E-mail : agupta@dghindia.org

Marketing Consultant : Fugro Data Solutions

For details visit websites :

www.indianelpviii.com, www.dghindia.org,
www.petroleum.nic.in

Road Shows at

Mumbai : 8 Aug. 09
 Houston : 20-21 Aug. 09
 Calgary : 24-25 Aug. 09
 London : 8-9 Sept. 09
 Perth : 22 Sept. 09
 Brisbane : 24-25 Sept. 09

For online registration to attend Road Shows : www.indianelpviii.com

Data viewing facilities at

- NOIDA (Near New Delhi)
- London • Houston
- Perth • Calgary
- Brisbane

Online data viewing is available

Prominent speakers at Road Shows

- Minister/Minister of State for Petroleum & Natural Gas
- Secretary/Additional Secretary, Ministry of Petroleum & Natural Gas
- Director General of Hydrocarbons



MINISTRY OF PETROLEUM & NATURAL GAS

GOVERNMENT OF INDIA

WATCHING GOVERNMENT

Nick Snow, Washington Editor

Blog at www.ogjonline.com

An anomaly among indicators

With Congress in recess and the Obama administration concentrating on other issues, late summer is a good time to sample some oil and gas statistics.

From the latest US Bureau of Labor Statistics Consumer Price Index, released Aug. 14: After rising 4.2% in June, the transportation index increased 0.2% in July. Most of the moderation was due to the motor fuel index, which fell 0.4% in July after jumping 17.2% the previous month, the US Department of Labor's statistical service said.

Petroleum import prices fell 2.8% during July after climbing 66.6% the previous 5 months, BLS said in another report. "Despite the jump between February and June, petroleum prices fell 49.9% over the past year," it added.

BLS's oil import price index fell 1.6% last month from June's level and came in 51.1% lower than the July 2008 figure, while its oil product price index was down 1.6% and 49.9%, respectively, for the same periods. Its natural gas import price index plunged 9.4% from June's level and was 68.8% lower than in July 2008.

WTI spot prices

How does that fit with the US Energy Information Administration's latest short-term energy outlook? It reported on Aug. 11 that the West Texas Intermediate oil spot price fell from \$71.47/bbl on June 29 to \$59.62/bbl on July 14 before rebounding to \$71.59/bbl on Aug. 3.

In its monthly statistical bulletin for June, the American Petroleum Institute reported on July 16 that

US petroleum product demand plunged to its lowest first-half level in more than a decade as the sluggish economy continued to squeeze oil consumption.

Domestic crude and condensate production, meanwhile, grew 3.4% in 2009's first half from the comparable period a year earlier, it added. Crude and product imports during 2009's first half were 7.6% lower year-to-year and 12% less than the comparable period 3 years ago, API said.

In a separate report on July 15, API said the number of US oil wells, gas wells, and dry holes drilled during the second quarter fell 46% year-to-year.

Growth area

Oil and gas extraction employment within the BLS employment survey's construction and extraction occupation sector in July was an estimated seasonally adjusted 169,600 jobs, 500 more than June's 169,100 jobs and 6,900 more than July 2008's 162,700 jobs.

It was the 67th consecutive month of employment growth in the subsector since December 2003, when BLS listed 118,400 oil and gas extraction jobs.

The subsector does not cover the entire oil and gas industry: Gas plant operators and refinery employees are part of the production sector, and wellhead pumpers and gas compressor and pumping station operators come under BLS's transportation and material moving sector. But the continuing oil and gas extraction job growth is curiously at odds with other government and industry statistical indicators. ♦

Red Cavaney, senior vice-president for government affairs at ConocoPhillips.

"At the end of the day, companies should protect the interest of their consumers and shareholders. We expect that the bill which will come out of the Senate will look very different from what came out of the House. From feedback we've been hearing, people recognize some of the imbalances in the House legislation," he told OGJ on Aug. 18. ♦

Magellan settles charges stemming from 2004 ammonia spills

Nick Snow
Washington Editor

Magellan Ammonia Pipeline Co. and two of its former affiliates agreed to pay a \$3.65 million civil fine to resolve federal water pollution charges stemming from two 2004 ammonia spills, the US Department of Justice and the Environmental Protection Agency jointly announced.

DOJ and EPA said the company, which is part of Magellan Midstream Partners LP of Tulsa, and the two former operating units, Enterprise Products Operating and Mid-America Pipeline Co. (Mapco), both based in Houston, agreed to the settlement in a consent decree filed in US District Court in Kansas City, Kan.

In a complaint filed jointly with the consent decree, the federal government alleged Magellan, which owned the pipeline, and operating firms Enterprise and Mapco were responsible for an anhydrous ammonia spill on Sept. 27, 2004, near Blair, Neb., which killed 1,000 fish along North Creek and a golf course pond, and a second spill on Oct. 27, 2004, near Kingman, Kan., which killed 20,000 fish along a 12.5-mile section of Smoots Creek.

One person was hospitalized and others were evacuated following the first spill, while the second pipeline

GENERAL INTEREST

rupture created a vapor cloud 40 ft high and also resulted in evacuations, the complaint said. It added the companies violated the federal Comprehensive Environmental Response, Liability, and Compensation Act by not immediately notifying the National Response Center about the spills.

Under the settlement's terms, DOJ and EPA said Magellan agreed to spend an additional \$550,000 on improve-

ments to prevent or minimize releases along selected segments of its pipeline system and will establish a program to minimize third-party damage to the system.

It also promised to make a series of required improvements in its employee training, leak response procedures, and protocols for detecting and responding to leaks and ruptures, the two govern-

ment entities said. Magellan presently operates the ammonia pipeline, having terminated its operating agreement with Enterprise and Mapco in 2007, they noted.

They said the consent decree is subject to a 30-day public comment period and approval by the federal court. A copy is available online at DOJ's web site at www.usdoj.gov/enrd/Consent_Decrees.html. ♦

CFTC to examine CCE's carbon financial instrument

Nick Snow
Washington Editor

The US Commodity Futures Trading Commission will examine whether a carbon financial instrument that trades on the Chicago Climate Exchange (CCE) performs a significant price discovery function, CFTC said Aug. 17.

This will be the second time the commission uses authority it received on Apr. 22 to determine if a specific transaction, contract, or agreement traded on an exempt commercial market (ECM) performs a significant price discovery function, CFTC Chairman Gary G. Gensler said. If its investigation finds that a financial instrument fits that description, the ECM must comply with position limits, reporting requirements and other rules under the Commodity Exchange Act with respect to the transaction, contract, or agreement.

It ruled on July 24 that the InterContinental Exchange's Henry Hub natural gas contract performed a significant price discovery function based on its high average daily trading volume, its reliance on the New York Mercantile Exchange's physically-delivered gas futures contract, and trader usage of the ICE contract's prices. ICE declared itself a registered CFTC entity 3 days later and announced that it would begin submitting enhanced market statistics for its cash-settled Henry Hub gas swap market to the commission immediately.

CCE operates North America's only

cap-and-trade system for six greenhouse gases, according to information at its web site at www.chicagoclimatex.com. Members voluntarily agree to meet annual greenhouse gas reduction targets. Those who come in below those targets can sell or bank surplus allowances, while those who come in above the targets can buy CCE carbon financial instrument contracts, it said.

CFTC said it is conducting the review after initially evaluating information that CCE provided indicating that the carbon financial instrument several statutory criteria for a significant price discovery determination. It will accept public comments for 15 days following its Aug. 14 publication in the Federal Register of a notice of intent about the examination. ♦

Western GOM lease sale attracts \$115 million in apparent high bids

Apparent high bids totaling more than \$115 million were offered for 162 tracts in the Western Gulf of Mexico during Lease Sale 210, reported the US Department of the Interior's Minerals Management Service Aug. 19 in New Orleans.

MMS received 189 bids totaling just over \$145 million from 27 companies at the sale. This compares with 423 bids received totaling \$607 million from 53 companies at the last western gulf sale (OGJ, Aug. 25, 2008, p. 30).

The ultradeep water was a big draw at the sale. Of the tracts receiving bids, 94 blocks were in 800-1,600 m of water, 10 were in 1,600-2,000 m of water, and 16 were in more than 2,000 m of water.

TOP 10 COMPANIES BY SUM OF APPARENT HIGH BIDS

Table 1

Rank, company	Total high bids	Sum of high bids, \$
1. BP Exploration & Production Inc.	37	50,634,191
2. ConocoPhillips	22	15,172,500
3. Petrobras America Inc.	4	10,000,000
4. ChevronUSA Inc.	26	9,075,343
5. ExxonMobil Corp.	17	8,587,021
6. Focus Exploration Inc.	15	4,732,858
7. Anadarko E&P Co.	5	4,367,544
8. Castex Offshore Inc.	3	1,912,000
9. Contango Operators Inc.	3	1,651,000
10. SWEPI LP	3	1,499,426

Source: US Minerals Management Service

This latest sale offered 3,435 blocks covering more than 18 million acres in the western gulf's Outer Continental Shelf planning area off Texas.

Based on the number of total ap-

GENERAL INTEREST

TOP 10 TRACTS BY HIGH BID

Table 2

Rank, company	Block	Water depth, m	High bid, \$
1. BP Exploration & Production Inc.	Keathley Canyon 96	800-<2,600	28,133,843
2. Petrobras America Inc.	Keathley Canyon 223	800-<1,600	8,122,000
3. BP Exploration & Production Inc.	Keathley Canyon 180	800-<1,600	5,133,843
4. ConocoPhillips	Alaminos Canyon 476	800-<1,600	3,060,000
5. BP Exploration & Production Inc.	East Breaks 875	800-<1,600	2,933,843
6. ConocoPhillips	East Breaks 406	400-<800	2,550,000
7. Anadarko E&P Co. LP	East Breaks 729	800-<1,600	2,249,351
8. BP Exploration & Production Inc.	Garden Banks 841	800-<1,600	1,933,843
9. Chevron USA Inc.	Alaminos Canyon 774	>2,000	1,462,076
10. Anadarko E&P Co. LP Nexen Petroleum Offshore USA Inc.	Garden Banks 448	400-<800	1,415,200

Source: US Minerals Management Service

parent high bids submitted, BP Exploration & Production Inc. topped the list with 37 bids totaling \$50 million. Chevron USA Inc. placed the next highest amount of apparent high bids, 26, totaling \$9 million.

ConocoPhillips Co. placed

22 total high bids totaling \$15 million.

BP E&P placed the highest single bid for a block—\$28.1 million for Keathley Canyon Block 96, which lies in more than 3,000 m of water.

The second and third highest single bids were placed by Petrobras America Inc. and BP E&P, respectively. Petrobras bid \$9 million for Keathley Canyon Block 223 in 800-1,600 m of water. BP bid \$5 million for Keathley Canyon Block 180 in 800-1,600 m of water. ♦

GAO considers refinery outage impact data gaps

Nick Snow
Washington Editor

While most refinery outages have modest, if any, price impact, analysis of the relationship could be improved, the Governmental Accountability Office said in a recent report. Gaps in federal data limit analyses of outage price effects and other issues, it said.

The report recommended that the US Energy Information Administration administrator convene a panel from other government agencies, the oil industry, public stakeholders, and other analysts and data users to find ways to improve available information.

It said that on rare occasions, events such as Hurricanes Katrina and Rita in 2005 can put enough refining capacity out of commission to have an obvious impact on prices. “While extreme outages can cause large temporary price increases, such events were relatively uncommon during the period of our analysis,” the report said.

During the period from 2002 through September 2008 in which GAO examined US wholesale prices across 75 US cities, the report said that of about 1,100 unplanned outages evaluated, 99% were associated with unbranded

wholesale price increases of no more than 32¢/gal, and 75% were linked to increases of less than 6¢/gal in affected cities.

Planned outages, where refineries are shut down for maintenance or equipment upgrades, generally did not have a significant effect on wholesale product prices, it continued. Such shutdowns typically come when demand is seasonally down and interspersed among refiners and refineries, it said.

Planned in advance

“In addition, the equipment and labor are generally booked months, or even years, in advance, and can be arranged with those customers with whom the refiners have long-term contracts at a cost less than would be required in an emergency or unplanned situation,” GAO’s report said.

It said that oil industry representatives also told GAO’s researchers that because a refinery must draw on a limited number of equipment manufacturers and skilled laborers, its maintenance plans eventually become public knowledge. “In this case, the market ‘expects’ the outage to occur; therefore, planned outages do not generally trigger significant price responses unless something

unexpected occurs or the market is disrupted elsewhere,” it said. Refiners also stockpile products to prepare for planned outages so they will not come up short while the plant work is going on, it added.

Unplanned outages, on the other hand, were associated with gasoline price increases, but the increases were generally small and depended on key factors, including whether the gasoline was branded or unbranded and the type of gasoline being sold, according to the report.

It said that GAO’s examination found that wholesale gasoline prices rose more for unbranded than branded customers following an unplanned interruption. “Specifically, we found that for conventional gasoline, the most common and widely available blend, unbranded gasoline had an average 0.5¢/gal increase associated with unplanned refinery outages, while branded gasoline had a smaller increase of about 0.2¢/gal,” it said.

This suggested that, as some traders and other market participants had told GAO’s researchers, refiners generally give priority to customers with long-term supply contracts, which typically are for branded outlets, during un-

DEEP OFFSHORE
TECHNOLOGY
INTERNATIONAL™

MONACO | NOVEMBER 2009

3-5 November 2009 | Grimaldi Forum Monaco | Monte Carlo, Monaco

CAN YOU AFFORD TO MISS THE INDUSTRY'S MOST
IMPORTANT DEEPWATER EVENT?REGISTER ONLINE TODAY AT WWW.DEEPOFFSHORETECHNOLOGY.COM

DOT International is the largest, most prestigious exhibition and conference on deepwater technology. As the industry's premiere event, DOT International thrives on providing attendees with up to date information and key industry developments.

Why Attend DOT International?

- A unique gathering of the world's leading executives, managers, and engineers from major and independent E&P companies.
- Original reports on the current and future state of technology in this frontier environment delivered by key personnel involved in groundbreaking projects.
- A renewed focus on deepwater technology and equipment, views at the strategic level with case studies and reports on application technologies.
- Geopolitical and economic evaluations of the future of deepwater around the globe with input from major, independent, and state-owned operators and producers.


To register and for more information, log on to www.deepoffshoretechnology.com

REGISTER BEFORE
30 SEPTEMBER & SAVE \$100


www.deepoffshoretechnology.com

PROGRESS

SPONSORS:       

OWNED &
PRODUCED BY: FLAGSHIP MEDIA
SPONSORS:

Oil, Gas & Petrochemical Equipment

SUPPORTED
BY:

GENERAL INTEREST

planned interruptions, the report said. In such conditions, unbranded independent marketers may be forced to pay higher prices to obtain product to sell, it said. "On the other hand, industry experts told us that unbranded sellers may be able to buy wholesale gasoline at lower prices than branded sellers during normal market conditions," it added.

Special fuel blends

GAO's examination also found that special fuel blends with characteristics such as unusual oxygenate requirements, lower Reid Vapor Pressure requirements, or unusual oxygenate/RVP combination may be more price-sensitive to unplanned outages, the report said.

"Specifically, the largest price differences between our conventional gasoline base case and special gasoline blends were for CARB without oxygenate and conventional gasoline blended with 10% ethanol and a 7.0 RVP," it said. "In these instances, prices were about 10¢/gal and 8¢/gal higher than our base case."

The analysis also showed that a number of other special fuel blends' prices did not increase significantly more than conventional gasoline's prices during unplanned interruptions, although this depended partly on whether the gasoline was branded or unbranded, GAO said.

"Finally, it should be noted that individual outages may have different effects on prices depending on a variety of [other] factors," the report continued. It said that one possible example might be a large shipment of a special fuel blend from Canada or overseas.

The type of equipment involved in an unplanned outage also is important, it said. A fluid catalytic cracker, because it is used to maximize gasoline production, could be expected to have more impact if it went down than a hydrotreater designed to produce distillates would, it said.

Federal data gaps

The report said that while agencies are taking steps to improve their data collection, existing federal data contain gaps which limit analyses of refinery outages' impacts on oil product prices and which, in some cases, do not reflect emerging trends.

"These data gaps created challenges to our, and another federal agency's, analyses and ability to respond to congressional inquiries," it said. "Specifically, we were limited in this report in our ability to fully evaluate the price effects of unplanned outages at individual cities, and a city's gasoline resupply options in the event of an outage."

GAO researchers' ability to evaluate price effects of unplanned outages in specific cities (such as Atlanta following Hurricanes Ike and Gustav) was limited because federal data do not link refiners with the cities they serve, GAO said. Federal data exist for most other refining activities, it observed.

The congressional watchdog service said that it eventually purchased data from an energy consulting firm, Baker & O'Brien, which it found sufficiently reliable for the report's estimates but not sufficiently accurate to estimate effects in individual cities.

It said that the absence of key data also limits federal agencies' ability to monitor the effects of emerging trends, such as the growing use of ethanol and other biofuels, in US oil product markets. "Specifically, we found that gaps in federal data do not allow agencies to track where gasoline blended with ethanol ultimately winds up in the fuel stream," the report said. "Not having this information may be at odds with consumers' interests."

Many agencies involved

It suggested that the situation is further complicated by several agencies collecting refined product data. EIA collects and analyzes data including supply, consumption, and prices of crude and products; inventory levels; refining capacity and utilization rates; and some product movements into and within the

United States, it noted. Since the US Environmental Protection Agency oversees regulation of pollutants, it can grant waivers to allow product markets to be more quickly supplied during emergencies. EPA also oversees the reformulated gasoline program and the federal renewable fuel standards.

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration deals with pipeline safety and establishes standards for crude oil and product transportation by pipeline, while the Federal Energy Regulatory Commission monitors energy markets and regulates interstate oil pipelines' rates and practices, according to the report.

"In some cases, the individual agency efforts have resulted in the collection of information that does not necessarily meet the data needs of other agencies or analysts who monitor petroleum product markets," it said. "For example, federal reporting efforts have evolved such that EIA maintain primary responsibility for collecting information on total gasoline supply, including gasoline blendstocks, while EPA maintains primary responsibility for capturing another characteristic, RVP, of certain gasoline blendstocks."

Making publicly held data complete and useful, as well as reducing costs, will require each agency to be aware of its part in the overall data picture as well as its data's usefulness beyond the agency's immediate mission, the report said. "Continued and improved coordination between such agencies, including EIA, EPA, DOT, and FERC, could improve the collective understanding and oversight of the refining industry and petroleum product markets," it suggested.

The report recommended that the EIA's administrator assemble a panel of representatives from these and other federal agencies, the oil industry, public stakeholders, and other analysts and data users to develop a coordinated interagency strategy for closing data gaps. It said that such a panel could assess the costs and benefits of collecting more

systematic information about which refiners serve which cities, and more discrete information about petroleum products' entry, flow, and exit through the US pipeline infrastructure.

Other areas of inquiry

Such a panel also could identify additional data that could be used to track emerging market trends, such as the proliferation of biofuels and special blends, and assess the costs and benefits of collecting the information. It could identify opportunities to coordinate federal data collection efforts, and areas where data collection is fragmented, such as multiple survey instruments collecting similar information, to determine if these efforts could be consolidated and modified to make the information more useful and more efficiently collected, according to the report.

It said that EIA, after reviewing a draft of the report, supported the recommendations, including suggestions to review data adequacy, strengthen interagency coordination, and fully engage government, industry, and public stakeholders. EIA also indicated that it believes it has a strong program to address all those suggestions and is working with other agencies through established joint programs as well as informally to coordinate data collection.

The national energy statistical and analysis service also issued public notices on Dec. 9, 2008, and Feb. 28, 2009, that it would review refinery outage data, a task it expects to complete this fall. At that time, said GAO, EIA plans to publish its analysts' assessments and recommendations for possible additional data and seek further comment, and would consider using a panel along the lines GAO suggested in its report to determine future steps.

Asked for his initial reactions to the report, American Petroleum Institute Chief Economist John C. Felmy said on Aug. 4 that much of what GAO found was a function of what API, which compiles its own data, has been talking about for some time.

"When a refinery outage involves a specialized formula produced for a limited area, the price impact obviously is larger, for example," he explained. "Also, the relationship of suppliers with branded and unbranded marketers is well known. Obviously, they would give preference to someone flying the company's flag at retail outlets than some-

one selling under his own brand. These conclusions are not at all surprising.

"We're willing to talk about it. The devil in the details is how much you can get at, what it would cost, and any additional burdens that would be created. But there's a new EIA administrator, and we'd be willing to discuss it," Felmy told OGJ. ♦

Brazil contemplating changes in oil law

Paula Ditttrick
Senior Staff Writer

Brazil's President Luiz Inacio Lula da Silva expects to send proposed changes in the country's oil laws to Congress within 2 weeks, he announced during an Aug. 18 speech in Rio de Janeiro state.

Specifically, Lula is contemplating laws that would regulate the exploration and development of a presalt oil region offshore. Discussions include possibly setting up a new state-owned company that would manage subsalt develop-

ment. Previously, some concessions were granted to various oil companies, including ExxonMobil Corp., BG Group, Hess Corp., and Royal Dutch Shell PLC as well as Brazil's own Petroleo Brasileiro SA (Petrobras).

Shell spokeswoman Kelly op de Weegh recently told Forbes.com that Shell is willing to work with the Brazilian government under "any new framework for the presalt region of the country." She emphasized that Shell would "like to see an environment that continues to promote the competitiveness of the market, protects the transparency and stability of the rules, and respects the contracts."

Previously, Lula commissioned a task force to make recommendations on how to regulate the presalt region. Changes in the oil law are expected to need ratification by Brazil's Senate (OGJ, Apr. 13, 2009, p. 20).

Petrobras being investigated

Mark Jones, chairman of Rice University's political science department, who specializes in Latin American politics, told OGJ that he believes Lula could run into snags as far as getting anything done now.

Brazil's Senate is looking into accounting practices by Petrobras. Meanwhile, legislative action in Brazil already has slowed because Senate President Jose Sarney is being investigated in a separate matter. Jones also noted that Brazil is slated for a presidential election next year.

Jones said Petrobras will need technical and financial help in developing the presalt region.

"Petrobras is a professional company. It's much less political than Pemex or PDVSA," Jones said in reference to the state-owned oil companies in Mexico and Venezuela.

Michael R. Smith, chief executive of Energyfiles, a UK-based oil and gas production, consumption, and drilling activity forecasting service, said Brazil is looking for ways to manage effective resource development during years of volatile energy prices.

Smith said he expects new state-owned Brazilian company would have little effect on international drilling contractors because any licensing company would have to hire rigs from somewhere. ♦

OGMT North America 2009 Preliminary Program

TUESDAY, SEPTEMBER 1, 2009

3:00 pm – 5:00 pm

KEYNOTE/OPENING SESSION

Ricky Smith, *GPAllied, LLC*

WEDNESDAY, SEPTEMBER 2, 2009

8:30 am – 10:00 am

SESSION 1: TESTING

Automated Diagnostics of Instruments, Controls and Valves Using Existing Plant Data
George Buckbee, *ExperTune, Inc.*

Web-Based 360-Degree Continuous Internal Corrosion Monitoring of a Multiphase
Liquids Pipeline

Sam Cauchi, *FOX-TEK (invited)*

Paper Title & Speaker TBD

10:45 am – 12:15 pm

SESSION 2: DOCUMENT MANAGEMENT

Pipe Handler Systems Struck by Lightning Results in 4 days of Downtime – How to Avoid
This and Similar Drilling Control System Problems

Nestor Fesas, *Athens Group*

Learn how you can implement your own successful software management process and start reaping the benefits now.

Operations and Maintenance Portal

Andrew Bourne, *WayPoint Technologies*

Still using a binder? O&M Portal: the web-based solution that allows you to effectively manage operations and maintenance anywhere in the world.

Paper Title & Speaker TBD

1:30 pm – 3:00 pm

SESSION 3: ASSET MANAGEMENT APPROACHES I

Measuring Sustainable Change

David Army, *CMRP, Strategic Asset Management*

Today's environment requires measurements that can predict, determine and influence desired outcomes rather than focusing on only lagging or outcome indicators. Measuring Sustainable Change will discuss the reasons why new performance measures are required and the need to include people and behavioral indicators back into the equations.

Cost Effective Maintenance Strategies for an Uncertain Economic Business Climate

Tracy Strawn, *Marshall Institute*

Maintenance Performance Improvement & Contracting Strategies Roadmap – Practical
Case Studies

Speaker TBD, *i-Quantum Solutions*

3:30 pm – 5:00 pm

SESSION 4: ASSET MANAGEMENT APPROACHES II

Effective Planning Produces Millions in Processing Benefits

Bill Christ, *Maintenance Strategies Consultants (invited)*

Delivering Real Business Benefits by Aligning the Maintenance Activity with
Corporate Objectives

David Kirkwood, *EC Harriss LLP (invited)*

Simulation Game

Rodolfo Stonner, *Petrobras America Inc.*

How to get an overall commitment to RCM practices through a stimulating and exciting simulation game, close enough to real world, depicting how these practices may really improve Production Losses, Budget Compliance and Manpower Utilization.

8:30 am – 10:00 am

10:45 am – 12:15 pm

1:30 pm – 3:00 pm

Owned & Produced by:

 PennWell®

THURSDAY, SEPTEMBER 3, 2009

SESSION 5: MAINTENANCE WORK PROCESSES

Integrated Safe Systems of Work Management Delivers Best PracticeMike Neill, *Petrotechnics*

This presentation will deliver best practice of ensuring consistency in hazardous maintenance work execution across the entire O&G value chain (up-mid-downstream) by identifying, and implementing a uniform, enforceable & scalable approach to how all maintenance work is done at the frontline (job site).

CMMS "Can Make Management Smile"Harry Baker, *ENI Petroleum (invited)***Implementing O&M Best Practices to Improve Plant's Performance Right the First Time**Jim Leitch, *Fluor Global Services*

This presentation will examine some strategies and best practices to implement early, while the new plant is being designed and built, in order for Owner/Operators to launch their production facilities on schedule, and with the right asset integrity and reliability work processes in place from Day #1.

SESSION 6: MECHANICAL INTEGRITY

Rehabilitation of High Pressure Pipe by an Internal Reinforcement TechnologyStephen Catha, *Smart Pipe Company Inc.*

This paper presents the underlying technology for the design and manufacturing of a high-strength thermoplastic composite material that is inserted in folded form into a degraded, high pressure, gas or liquid pipeline to restore its original operating pressure over long distances with minimal surface disruptions.

Risk Contingency Options For Fitness For Service Inspections and Repair of Degraded Pressure Vessels and PipingPaul Manzon, *PMC Engineering*

Cost effective approaches in the analysis and repair of degraded pressure boundaries.

Replacing Chemical Biocides with Targeted Bacteriophages in Oil and Gas OperationsNeil Summer, *Phage Biocontrol*

SESSION 7: FACILITY MAINTENANCE

Use of Adhesively bonded Surface Mounted Fasteners to Reduce the Amount of Down-Production Time During MaintenanceTimothy Anderson, *(invited)***Produced Water Treatment Equipment: Repair or Replace?**Frank Richerand, Sr, *Enviro-Tech Systems LLC*

Guide to determining whether produced water handling equipment should be repaired or replaced.

Paper Title and Speaker TBD

Speakers and/or presentation titles subject to change.



September 1-3, 2009
New Orleans, LA
Hilton New Orleans Riverside

The Oil & Gas Maintenance Technology North America Conference and Exhibition is the premier event for maintenance and reliability technologies in North America and the Gulf of Mexico. The first and only conference and exhibition of its kind in North America, OGMTNA is not to be missed. This unique opportunity will allow you to interact with a specialized audience of maintenance professionals from upstream to downstream.

Register today for this highly-anticipated event!

www.ogmtna.com

3 Easy Ways to Register

- 1. online:** www.ogmtna.com
- 2. fax:** Direct 1-918-831-9161
or Toll-Free (US only) 1-888-299-8057
- 3. mail:** PennWell Registration OGMT North America, PO Box 973059, Dallas, TX 75397-3059 USA

Flagship Media Sponsors:

Sponsored By:



Offshore

Oil, Gas & Petrochem
EQUIPMENT

EXPLORATION & DEVELOPMENT

Exploration has persisted in some of the world's remote and underexplored basins even in the face of weak oil prices at half or less than their level of a year ago.

Discoveries have also resulted as operators work to minimize the time elapsed between obtaining acreage and deriving revenue from hydrocarbons discovered, produced, and sold.

Remote, underexplored basins still objects of exploration

Alan Petzet
Chief Editor-Exploration

This article describes exploration projects in the Namibe basin off Namibia, the Flamingo

Trough between Australia and Timor-Leste, several basins off southwestern Greenland, the Pelagian basin in the

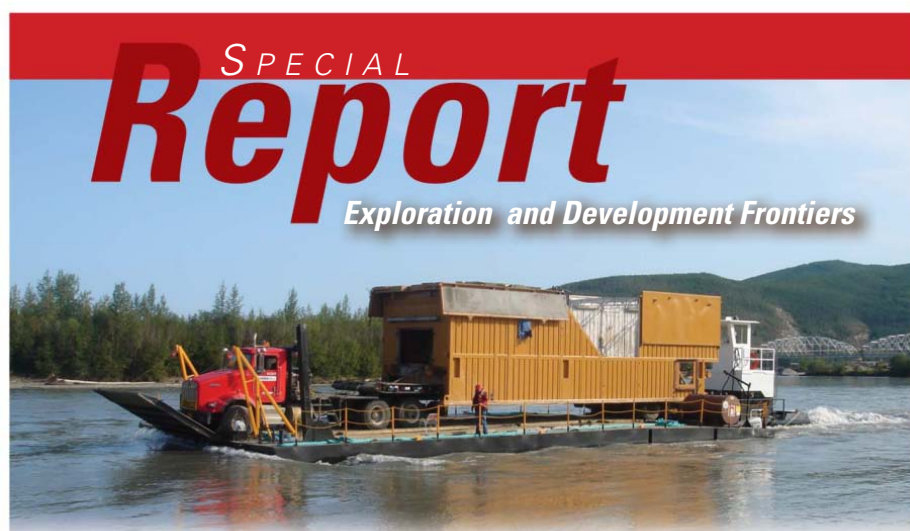
only a single wellbore the group hopes that formation characteristics improve beyond the local area.

More drilling will be required to answer the question, but the group released the Deep Venture drillship, formerly Valentin Shushan.

Namibia's Ministry of Mines and Energy released a statement saying that the Kunene-1 exploratory well in the Namibe basin "could contain a potential gas resource of up to 14 tcf."

Sintezneftgaz of Moscow operated the well, and a Moscow subsidiary of Schlumberger Ltd. that ran the tests and analyzed the results attributed the resource to an interval at 4,698-4,748 m, the ministry said. TD is 5,052 m.

EnerGulf Resources Inc., Vancouver, BC, the only public company in the well, elected not to participate in the



Mediterranean off Tunisia and Italy, the Mediterranean off Libya, and a remote area of the Western Canada Sedimentary basin in east-central Saskatchewan.

Namibe basin, Namibia

At least 6 months of data integration lie ahead for a group that made what appears to be a giant gas-condensate discovery off northernmost Namibia (Fig. 1).

Reservoir quality appears to be poor at the Kunene-1 discovery, but with

tests. EnerGulf, with 10% interest in 960,000-acre Block 1711, said it did not receive a copy of the Schlumberger unit's report and has not verified the potential resource. EnerGulf said the resource "may not be compliant with NI 51-101."

EnerGulf said the joint operating agreement allows it to reinstate its pro-rata rights in a commercial discovery in the interval that was tested by paying twice its share of the test's costs. The company had previously said the well,

the first on the block, demonstrated the presence of hydrocarbons but probably will not be a commercial producer (OGJ, Aug. 18, 2008, p. 46).

The 6 months of analysis will involve integrating information from cuttings, well logs, and core samples and calibrating it to 3D seismic data, said Jeff Greenblum, chairman and chief executive officer of EnerGulf.

Other interests in the block are Sintezeftgaz 70%, PetroSA 10%, and Namibia's state Namcor 7% carried.

Vanco Energy Co., Houston, originally shot 2,000 km of 2D seismic and 685 sq km of 3D seismic on the block before relinquishing its interests.

The ministry said, "Seismic reinterpretation and reprocessing over the Kunene and Hartmann prospects have demonstrated that both these structures can be correlated with the Apto-Albian sediments of the South West African margin.

"There were gas shows in the Albian and Aptian sediments, confirmed by wireline logging. It was not possible to fully evaluate the hydrocarbon potential of the penetrated section due to operational problems during testing. However, seismic interpretation suggests that alteration of the sediments by igneous activity may be localized to an area near the borehole, and therefore both the tested zones and some untested zones have great potential."

EnerGulf said it looks forward to continuing the exploration program on the remote block, 800 miles northwest of Kudu gas field and several hundred miles south of the nearest production off Angola.

Saskatchewan, Canada

Hunt Oil Co., private Dallas independent, and Nordic Oil & Gas Ltd., Winnipeg, Man., signed a strategic development agreement regarding gas exploration in east-central Saskatchewan.

Nordic didn't discuss specifics of the geology but has previously said that its lands, on the northeast flank of the Western Canada Sedimentary basin,

have gas and oil potential in at least 10 formations from the Second White Specs to the Winnipegosis sand. The area has no oil or gas production.

Nordic will have the opportunity to earn an interest in 153,600 acres of Hunt-owned land at Preeceville, 130 miles northeast of Regina, Sask. The ensuing exploration work on the lands will result in Hunt having the option to participate on a 50-50 go-forward basis with Nordic, or allow Nordic to retain a 100% interest in the land with Hunt earning a gross overriding royalty.

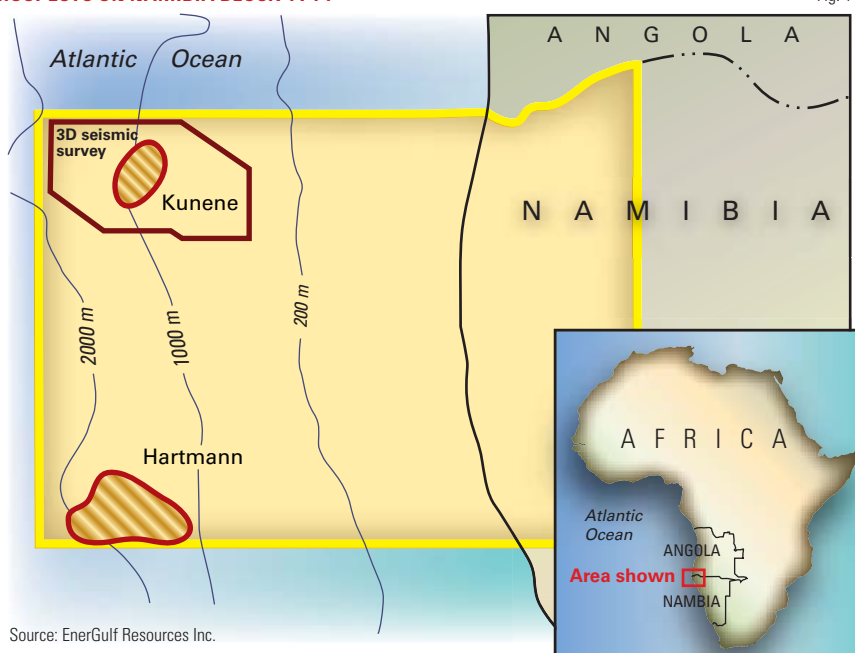
Hunt's acreage lies a few miles southeast of lands held by Nordic,

where survey work has begun for a five-well program. Drilling is to start in September 2009. Nordic has an 80% interest in 137,780 acres.



The Russian-owned Deep Venture drillship handled the drilling of the Kunene-1 exploratory well for the Sintezeftgaz group on Block 1711 in the Atlantic off Namibia. Photo by Jeff Greenblum, courtesy of EnerGulf Resources Inc.

PROSPECTS ON NAMIBIA BLOCK 1711



Source: EnerGulf Resources Inc.

Fig. 1

EXPLORATION & DEVELOPMENT

GREENLAND'S OIL AND GAS LICENSES IN FORCE

Fig. 2



Source: Modified from Bureau of Minerals & Petroleum

Flamingo Trough, Timor Sea

A two-well exploration program could start as soon as late 2009 subject to rig availability on Block JPDA 06-103 in the Timor Sea between northwestern Australia and Timor-Leste.

Japan Energy Corp. took a farmout from Oilex Ltd., Perth, to earn an interest in the large Block JPDA 06-103 production sharing contract. Oilex will remain operator of the PSC.

The block is replete with large structures off the northeast flank of oil fields in the Flamingo Trough (see map, OGJ, Apr. 27, 2009, p. 39).

Interpretation of 2,140 sq km of 3D seismic over the central two-thirds

Block 06-103 identified more than 20 prospects and leads. Four of the prospects are in less than 470 m of water.

The first two targets and their mean prospective resources are Lore at 195 million bbl and Lolotoe at 90 million bbl.

Oilex noted that the area's prospectivity is implied by the discovery of Kitan oil field by Eni SPA, for which a development plan has been submitted, and the Kuda Tasi and Jahal discoveries north of Kitan, Laminaria and Corallina fields to the west, and Bayu-Undan field to the south.

Kitan-1 flowed 6,100 b/d of oil on test. TD is 3,568 m. It is on Block 06-

105 held by Eni 40%, Inpex of Japan 35%, and Talisman Resources Pty. Ltd. 25% (OGJ, Mar. 17, 2008, Newsletter). Kitan-2, 1.6 km east, went to TD 3,540 m. Early estimates are that 30-40 million bbl of oil are recoverable from Kitan.

Eni's proposed development area encompasses Kitan field and a satellite closure, Kitan South, 1.5 to 2 km south. A development plan calls for producing three wells through an FPSO and possibly tying in the 1996 Jahal and 2001 Kuda Tasi marginal discoveries (OGJ Online, July 23, 2008). Jahal and Kuda Tasi hold a combined 10 million bbl recoverable.

Oilex's agreement with Japan Energy is conditioned on the JPDA Designated Authority extending the contract which ends in January 2010 and approval by the authority and other participants who have preemption rights of the transfer of interest to Japan Energy.

After the conditions are satisfied, interests will be Oilex (JPDA 06-103) Ltd., operator, 10%, Global Energy Inc., GSPC (JPDA) Ltd., and Bharat PetroResources JPDA Ltd. 25% each, and Japan Energy E&P JPDA Pty. Ltd. 15%.

West Greenland basins

With only seven wells drilled, most of them in the 1970s, underexplored western Greenland has begun to attract exploration companies as deepwater drilling technology has emerged.

Cairn Energy PLC, Edinburgh, said, "The results of these wells, together with more recent onshore geological mapping over the past 15 years, have confirmed the presence of all the essential elements required for the generation and trapping of hydrocarbons."

The Bureau of Mineral Resources points out that two breakthroughs in the late 1980s and early 1990s changed industry's appreciation of the area's hydrocarbon prospectivity.

One was the realization that prospective sedimentary basins are much larger than was believed through the 1970s. The other was the discovery of extensive oil seeps in the onshore Nuussuaq basin, whereas the area had been inter-

preted previously as being gas prone.

“Modern understanding suggests that the sedimentary basins offshore southern and central West Greenland cover an area of more than 200,000 sq km, which is larger than the combined Viking Central graben system of the North Sea,” BMR said.

As of mid-2009, Greenland had granted 13 oil and gas licenses that cover a combined 130,000 sq km, and a record of more than 30,000 line-km of 2D seismic was shot in the summer of 2008. Controlled source electromagnetic surveys have also been run on several blocks.

Each of the 13 licensed blocks covers 10,000 to 13,000 sq km (Fig. 2). The seven northernmost blocks lie above the Arctic Circle.

The blocks off western Greenland lie 900-1,600 miles north of nearest oil production on the Grand Banks off Newfoundland, although an estimated 2.3 tcf of gas-condensate was discovered in Paleocene sands as close as 300 miles west at the Hekja O-71 well in 1979-80 in Canadian waters off the south end of Baffin Island (OGJ, July 12, 1982, p. 145). Hekja has not been developed.

The Atammik and Lady Franklin blocks are EnCana Corp.’s only exploration interests outside North America.

Cairn Energy PLC said its Capricorn Energy Ltd. subsidiary plans its first operated exploratory drilling off southwestern Greenland in 2011. The eight blocks in which Capricorn’s interests total 72,000

EXPLORATION AREA OFF LIBYA

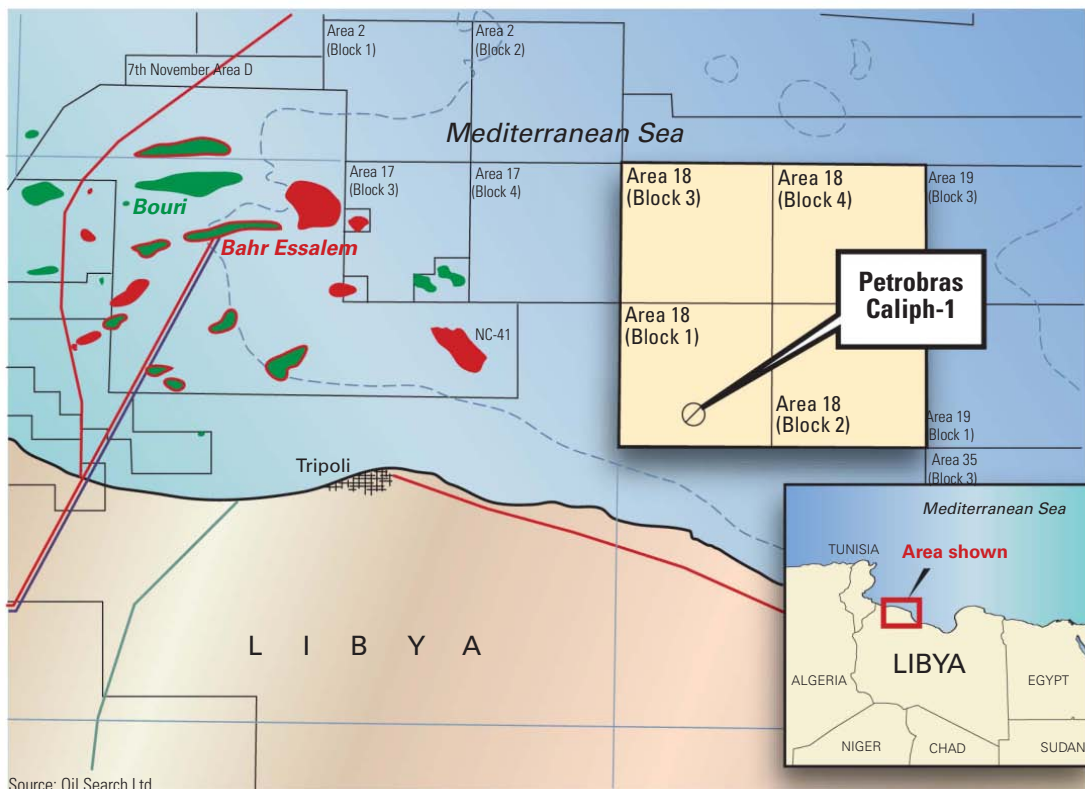


Fig. 3

sq km in 50-2,200 m of water.

Cairn shot 7,130 line-km of 2D seismic in 2008 on the Sigguk and Eqqua blocks, which cover 23,024 sq km in the Baffin Bay basin in 260 m to more than 1,000 m of water, and planned in 2009 to survey a conceptual pipeline route from Sigguk to a peninsula just north of Disko Island.

About 3,000 line-km of 2D seismic were to be shot on the four blocks in the Cape Farewell region off southernmost western Greenland in 2009 following the 2,000 line-km taken in 2008. An aerogravity and magnetic survey that began in 2008 was to be finished in mid-2009.

A planned government licensing round in 2010 is to cover eastern Baffin Bay from north of the Sigguk block as far north as 75° N. Lat., near Kap York and Thule Air Base in Greenland east of Ellesmere in the Arctic Islands of Nunavut off Canada. A planned round in 2012 extends along the East Greenland coast at similar latitudes.

Tunisia-Italy offshore

AuDAX Resources Ltd., Perth, invited 15 drilling contractors to bid to drill the Sambuca prospect in the Sicily Channel off Tunisia in the first half of 2010 using a semisubmersible rig.

Sambuca is in the contiguous G.R15. PU exploration permit northwest of Pantelleria Island off Italy and the Kerkouane permit off Tunisia. It appears to be one of the largest undrilled structures in the Mediterranean Sea with a mean unrisks potential of 270 million boe recoverable.

The prospect covers 60 sq km in 400 m of water in the Pelagian basin north of Tazerka oil and gas field. Main objective is the Miocene Birsra sandstone at 1,440 m, and other targets are Miocene Ain Grab and Cretaceous Abiod as deep as 2,500 m.

Libya offshore

Operators have drilled two wells on Gulf of Sirte blocks acquired in Libyan licensing rounds.

MANAGING THE WAVES OF CHANGE



DEEPWATER OPERATIONS CONFERENCE AND EXHIBITION

November 10 – 12, 2009
Moody Gardens Hotel and Convention Center
Galveston, Texas

PLAN TO ATTEND TODAY!

Register today at
WWW.DEEPWATEROPERATIONS.COM

Owned & Produced By:

PennWell

Flagship Media Sponsors:

Offshore

**OIL & GAS
JOURNAL**

Host:

Anadarko
Petroleum Company

Silver Sponsor:

NALCO

Bronze Sponsor:

Petrofac



Sponsored by:

Baker

FMC Technologies

multi-chem

A group led by the Braspetro BV international unit of Brazil's Petroleo Brasileiro SA spudded the A1-18/01 well in Area 18 about 75 miles east-northeast of Tripoli in late May 2009 using the Songa Saturn drillship (Fig. 3).

The wildcat was designed to test the Caliph 3D seismic prospect that has several geological objectives to its planned total depth of 4,700 m. The license, which was awarded in 2005 and expires in 2010, is in 300-700 m of water.

In early August, partner Oil Search Ltd., Sydney, said drillers were running in the hole to drill ahead in sidetrack No. 2 from a depth of 2,603 m after having encountered hole problems in a first sidetrack.

Besides proven oil plays in Eocene and Cretaceous carbonates, the well targets new gas plays in Jurassic and Triassic clastics.

A second large lead is being worked up on reprocessed seismic and could form the basis for a second well, Oil Search said.

Block interests are Braspetro 70% and Oil Search (Libya) Ltd. 30%.

Meanwhile, ExxonMobil Exploration Co.'s Libyan affiliate spud a deepwater exploration well off Libya in late July.

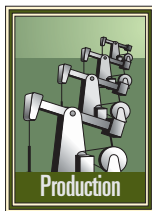
The A1-20/3 well is being drilled in Contract Area 20 in the Sirte basin in the Mediterranean northeast of Misrata, Libya.

ExxonMobil Libya Ltd. didn't give the water depth or projected depth of the well. It is using Noble Africa Ltd.'s Noble Homer Ferrington semisubmersible capable of drilling to 30,000 ft in as much as 7,200 ft of water.

Elsewhere in Libya, the subsidiary has completed two 3D seismic surveys in offshore Contract Areas 20 and 21 and three 2D seismic surveys in offshore Contract Areas 44, 20, and 21. ♦

DRILLING & PRODUCTION

Microbial enhanced oil recovery (MEOR) projects carried out during the last 10 years provide a basis for characterizing the types of reservoirs suitable for MEOR applications.



This concluding part in a two-part series describes 10 field cases involving 221 producing wells in Malaysia, the US, Argentina, and China. The first part (OGJ, Aug. 17, 2009, p. 39) discussed the ways microbes can enhance oil recovery.

Of the 10 field cases discussed, most are in China.

Malaysia

Offshore Malaysia, Bokor field received MEOR treatments.¹ The producing reservoir in the field has good 50-4,000 md permeability and produces viscous oil (see table below).

The operator injected bacteria solution into three production wells and then shut them in for 5 weeks.

After production resumed, oil production in one well increased to 1,500 b/d from 600 b/d before the treatment. Water cut from this well declined to

45% from 75% before the treatment. The effects, however, only lasted 2 weeks, and the other two treated wells showed no significant response.

US

Operators in the US have reported very few MEOR field cases in the past 10 years, possibly because they have been reluctant to reveal their production data.

In one reported project in Alabama, the operator injected only nutrient (mixture of molasses, KNO_3 , and NaH_2PO_4) into the target reservoirs to feed indigenous microbes.²

The producing formation was the Carter sandstone at a 2,300-ft deep. The producing area had 20 injectors and 32 producers, producing 290 bo/d, 60 Mscfd of gas, and 3,100 bw/d of

water. The operator injected nutrient into only four of the injectors.

By yearend 1996, 8 of the 15 connected production wells showed a positive response.

Carbon number analysis indicated the wells produced extra oil from previously unswept reservoirs, which indicates selective plugging as the EOR mechanism.

Field cases illustrate MEOR effectiveness

Chang Hong Gao
Abdulrazag Zekri
Khaled El-Tarabily
UAE University
Al Ain, UAE



MEOR FIELD TRIALS

Table 1

Location	Reference	Oil field	No. of wells	No. of positive wells	Reservoir temp., °C.	Reservoir permeability, md
Malaysia	1	Bakor	3 producers	1	48	50-4,000
US	2	North Blowhorn Creek	4 injectors and 3 producers	8	<55	0.7-141
Argentina	3	Piedras Coloradas	6 producers	6	76	5-10 and 120 in two formations
Argentina	4	Papagayos Vizcacheras	1 injector and 9 producers	9	92	1,000
China	5	Changqing	27 producers	Not reported	43-54	2-149
China	6	Shengli	3 producers	Not reported	66	89-263
China	7	Wenmingzhai	12 injectors and 29 producers	25	85	60-726
China	8	Dagang	5 injectors and 7 producers	7	73	259 and 468
China	9	Chaoyanggou	60 producers	43	55	203, average 10
China	9	Pubei	10 producers	8	50	103
China	9	Chaoyanggou	2 injectors and 10 producers	7	55	10
China	10	Fuyu	6 producers	4	30	240

DRILLING & PRODUCTION

SIX WELLS, PIEDRAS COLORADAS FIELD

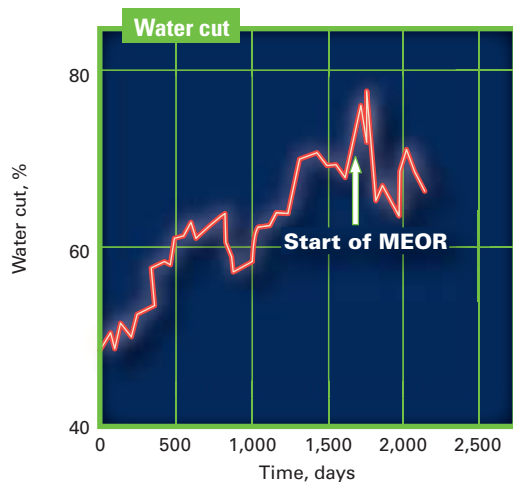
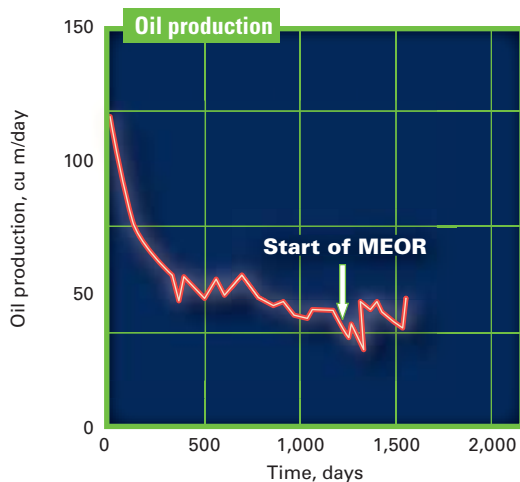


Fig. 1

had a high 96% water cut.

Nine producing wells had a positive response from the bacteria solution injected in an injection well.

Fig. 2 shows an example from one of the wells in which oil rate increased and water rate decreased.

In addition, crude oil viscosity decreased after the microbial treatment. For well VI-50, crude viscosity decreased to 50 cp from 115 cp before MEOR.

From August 2000 to August 2003, MEOR extracted an additional 37,000 bbl from the reservoirs.

The estimated cost per incremental barrel was \$2.90.

WELL VI-58, PAPAGAYOS RESERVOIR

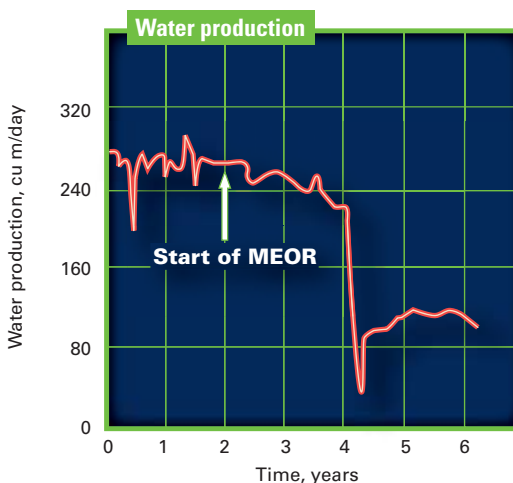
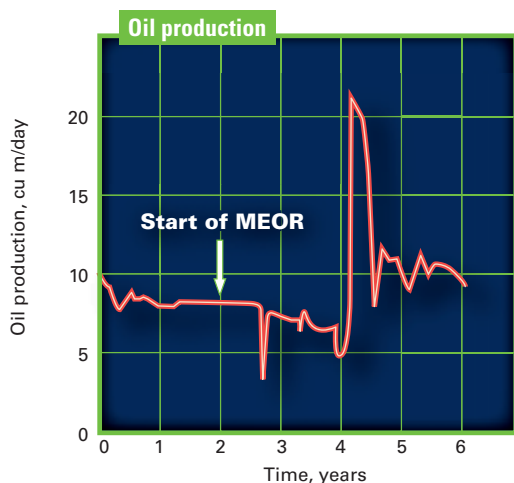


Fig. 2

The field recovered 69,000 bbl of extra oil because of the microbial treatments.

Argentina

Argentina MEOR operations include huff-and-puff projects in Piedras Coloradas field.³ Receiving the bacteria treatments were two wells in Barrancas formation and four wells in Blanco formation.

The Barrancas formation has a 120-md permeability and 170° F. temperature, while the Blanco formation has a 5-10 md permeability and 180° F. temperature.

The operator injected bacteria solution in the 6 producers, followed by a 72-hr shut-in.

The treatment increased oil production rates (Fig. 1), decreased water cut, and decreased crude viscosity.

The estimated cost per incremental barrel was \$5.10.

Another Argentina MEOR was a bacteria flood of the Papagayos reservoir in Vizcacheras field.⁴ The top of reservoir is at 1,850 m. The reservoir has a 1-darcy permeability, 1,400-psia pressure, and 198° F. temperature.

Before MEOR, the Papagayos reservoir was waterflooded. The production

oil companies also have implemented MEOR projects.

The Maling block in Changqing oil field was one of the fields with MEOR field tests.⁵

Laboratory tests had shown that bacteria could lower oil viscosity, paraffin content, and pour point. The selected block has low 2-149 md permeability, medium 43-54° C. temperature, and high salinity, up to 104,400 mg/l.

The operator treated 32 wells with bacteria. Each well treatment consisted of 24 cu m of microbe-laden fluid, displaced by clean water. Water cuts and fluid production remained almost

China, Changqing

Several Chinese



Held Under the Patronage of
H.E. Dr. Abdul-Hussain Bin Ali Mirza - Minister of Oil & Gas Affairs and
Chairman of National Oil & Gas Authority, Kingdom of Bahrain



OFFSHORE MIDDLE EAST™

Bahrain International Exhibition Centre, Manama, Bahrain
27 - 29 October 2009, www.offshoremiddleeast.com

Delivering Solutions for Offshore Growth

REGISTER ONLINE TODAY
www.offshoremiddleeast.com

It is said that "The secret of success is to surround yourself with successful people". On 27-29th October you have an extremely valuable opportunity to do exactly that.

You are invited to join some of the most successful industry leaders to share the insights, foresight and experiences at Offshore Middle East 2009 in Manama, Kingdom of Bahrain.

Offshore Middle East 2009, the only event dedicated to offshore oil and gas technology in the Middle East, will enable you to make important connections in the region's offshore oil and gas industry. Offshore Middle East provides a forum where industry leaders can address technical issues, introduce pioneering technology and share lessons learned about finding, developing and producing oil in the Middle East offshore regions.

Top Reasons to Attend Offshore Middle East 2009:

- High quality speakers providing detailed insight into region's offshore oil and gas industries
- Interactive panels and sessions
- Networking receptions providing opportunities to meet key industry players
- Leading industry exhibition.

Register before 25 September and save up to 15%

To find out more and to register please visit our website at www.offshoremiddleeast.com

Host and Platinum Sponsor:



Owned and produced by:



Supported by:



Sponsors:



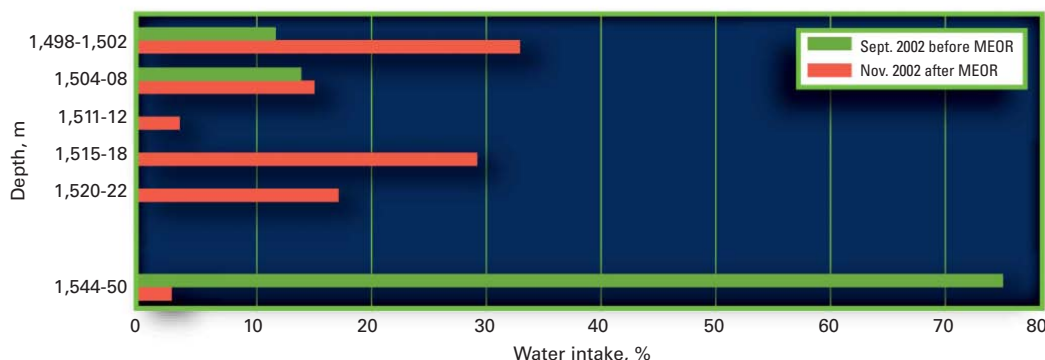
Flagship Media Sponsors:



DRILLING & PRODUCTION

WELL M159 WATER INTAKE PROFILE, SHENGLI FIELD

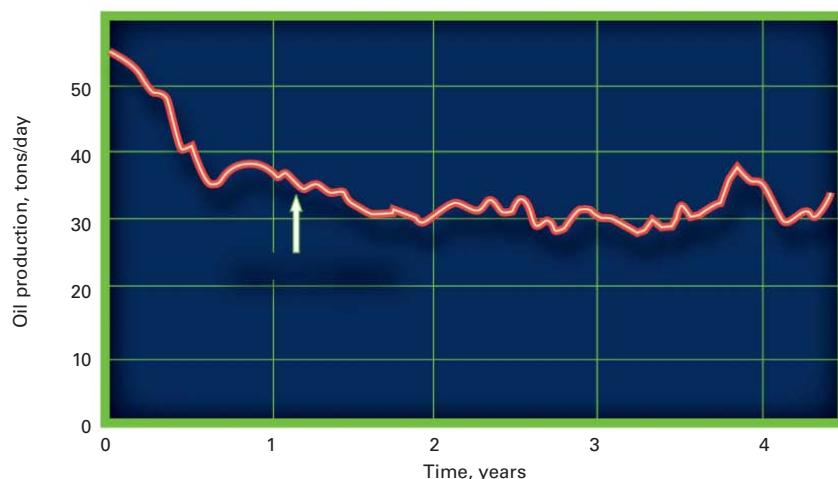
Fig. 3



Fluid production from the wells increased to 1,145 cu m from 1,102 cu m before treatment. Oil production increased to 146 tons from 108, and water cut decreased to 80% from 83%. The treatment was effective for 180 days.

GUAN 69 BLOCK, DAGANG OIL FIELD

Fig. 4



For injection well M159, the bacteria treatment greatly altered the injection profile. Before the treatment, the zone at 1,544-1,550 m took more than 70% of injected water. After bacteria treatment, the same zone took less than 5% of the injected water and several new zones began taking the water (Fig. 3).

This indicates that selective plugging played an important role in improving production.

China, Dagang

Dagang oil field is another field in China with an MEOR project. The work isolated three strains in the Guan 69 block of Dagang oil field. The strains were arthrobacter, pseudomonas, and bacillus species.⁸

The two producing formations have 468 and 259-md permeability and a 73° C. temperature. The produced crude had high, about 28%, paraffin content and high, about 24%, asphaltene content.

The formation water salinity was 16,790 mg/l.

Before the bacteria treatments, the reservoir had produced 22.6% of original oil in place and water cut had reached 94.5%.

The project involved injecting nutrient for 3 days followed by bacteria solution injection and a 10-day shut-in. After the shut-in, the wells received nutrient again for 21 days.

After production resumed, the operator observed a decrease in interfacial tension, lower crude viscosity, and

unchanged after microbial treatments, while oil production increased by 18%, especially for wells with high permeability.

The project recovered an estimated 2,500 tons of extra oil because of MEOR technology.

China, Shengli

Another MEOR project was Shengli oil field. This project only included the injection of nutrient for activating indigenous bacteria.

The Shan 12 block of Sinopec's Shengli oil field has relatively low 89-263 md permeability and medium 66° C. temperature.

Injection of nutrition started in August 2004.⁶

After the wells took nutrition,

injection pressure climbed to 10 MPa from 2 MPa. Three producers showed increase in fluid output. Oil production increased to 23.8 tons/day from 8.9 tons/day before the treatment. Water cut declined to 80% from 92%.

The cumulative incremental oil production reached 2,700 tons.

The increase in injection pressure indicated that injected water had started to sweep low-permeability zones.

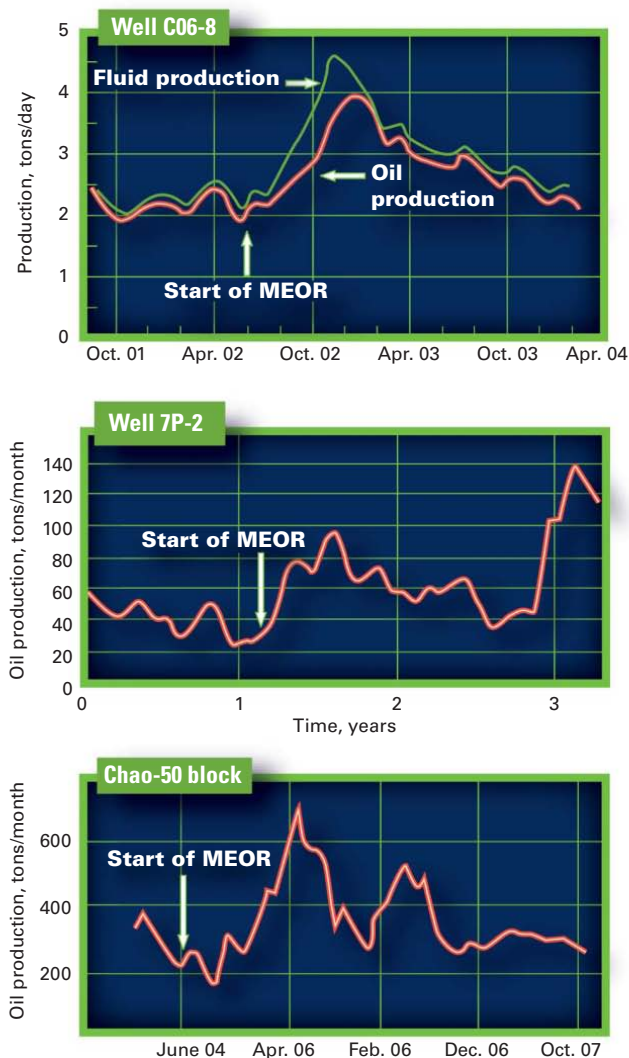
Another Shengli MEOR project was a microbial flood in the Wenmingzhai block.⁷

The formation has a high 85° C. temperature and a high 123,000 mg/l. salinity.

The operator injected bacteria into 12 injection wells. Among the 29 producers, 25 wells increased production.

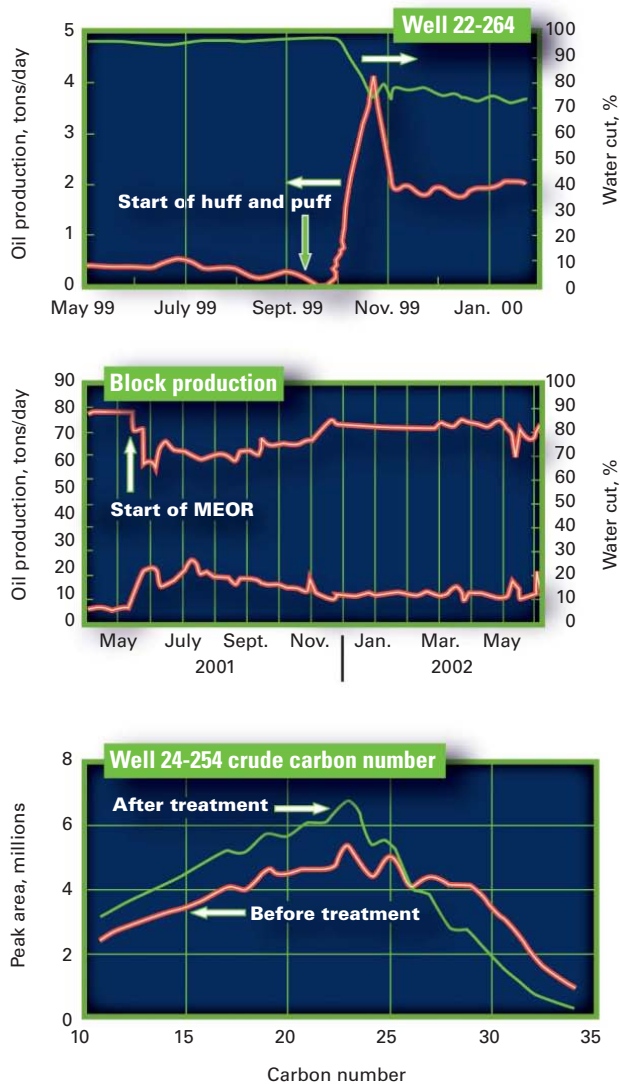
DAQING OIL FIELD MEOR

Fig. 5



FUYU OIL FIELD MEOR

Fig. 6



fewer heavy components in the crude. The project successfully controlled the decline in oil rate (Fig. 4).

By the end of July 2004, all seven production wells showed positive responses to microbial treatments, and the project had recovered about 8,700 tons of additional oil.

China, Daqing

The Daqing oil field from 2002 to 2005 had a huff-and-puff project and microbial flooding project in the Chaoyanggou block. The project injected bacillus cereus and brevivacillus brevis bacteria.²⁰

The formation has a low 55° C. tem-

perature and low 2-30 md permeability. The treatments, conducted in 60 wells, showed significant oil production rate increases in 43 wells.

The project divided the wells into three categories based on reservoir permeability. Among the 28 wells in the Class I reservoir with permeability higher than 15 md, 22 wells increased oil production.

Among the 22 Type II wells with reservoir permeability from 5 to 15 md, 15 wells increased oil production.

Of the 10 Type III wells with reservoir permeability less than 5 md, 6 wells showed a positive response.

The cumulative incremental oil pro-

duction was 9,175 tons.

Fig. 5 charts a well's production history in which liquid output and oil production increased after bacterial treatment.

For another huff-and-puff project in the nearby Pubei block, 8 out of 10 wells increased fluid and oil production while water cut decreased.⁹

Fig. 5 also shows the production history of well 7P-2.

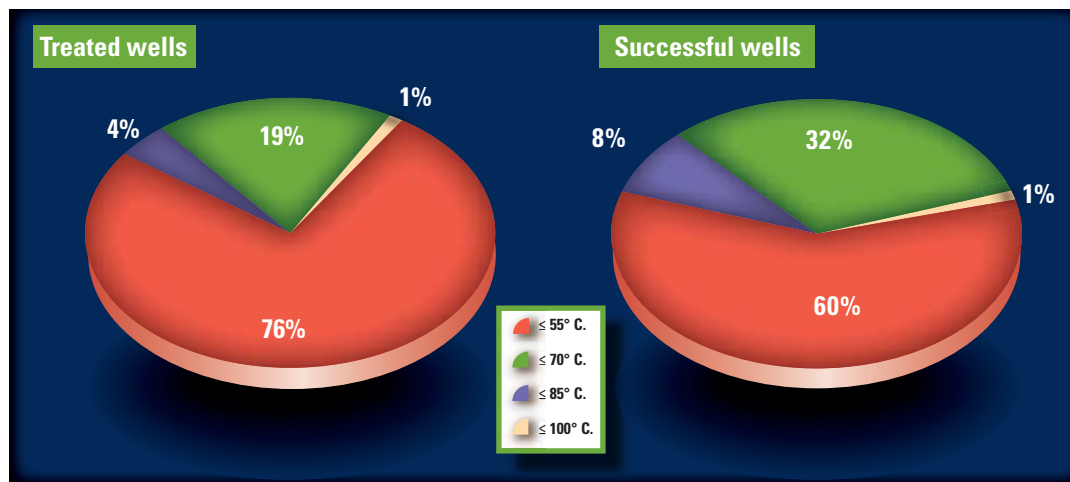
The cumulative incremental oil production was 1,873 tons. The block has a low 50° C. temperature and low 103-md permeability.

The success of the Pubei block huff-and-puff project led to bacteria flooding

DRILLING & PRODUCTION

RESERVOIR TEMPERATURES

Fig. 7



of the Chao-50 unit in Chaoyanggou field.⁹ The project involved 2 injectors and 10 producers.

Seven of the 10 producers had a positive response. The oil production for the unit increased to 700 tons/month from 300 tons/month (Fig. 5). Water cut decreased to about 40 from 47%. The effect of treatment lasted 3 years.

On the other hand, the wells' injection pressures started to decline after bacteria treatment. This indicated the lowering of interfacial tension and oil viscosity were the mechanisms for enhancing production. Moreover, previous laboratory tests also proved that bacteria treatments lowered interfacial tension and oil viscosity reductions under the reservoir conditions.

China, Fuyu

Fuyu field had both huff-and-puff and microbial flooding projects.¹⁰ The target reservoir was shallow sandstone with a low 30° C. temperature and relatively low 240-md permeability.

Before bacteria treatment, most wells had high, more than 90%, water cuts.

The first attempt injected 10% molasses solution into the reservoir to stimulate the indigenous bacteria. The operator, however, did not observe an increase in oil production, indicating that the favorable bacteria for MEOR could not compete with other species

under sole nutrition injection.

The second attempt screened the indigenous bacteria from reservoir rocks to determine the strain that could produce insoluble polymer. The screening identified a strain of CJF-002 as a promising microbe for field trial. Based on rDNA sequences, CJF-002 belonged to 13 enterobacter species.

The operator tested the huff-and-puff method with CJF-002 strain in six producing wells. After a shut-in of 10 days, four of six wells showed significant increases in oil production rate (Fig. 10). Moreover, tests detected high concentration of CJF-002 in the produced fluid, indicating that the selected strain was prospering in the target reservoir.

A third attempt applied bacteria flooding to 2 injection wells connected to 10 production wells. The attempt injected a strain of CJF-002 for 2 weeks, followed by a 1-week injection of 0.1% molasses solution. In addition, injected was 1, 5, and 20% molasses solutions subsequent to bacteria injection. Waterflooding resumed after the injections.

Produced water analysis, however, showed the concentration of CJF-002 was much lower than other species. Moreover, the operator did not observe an increase in oil production.

This pilot test concluded that the project should have a higher concentra-

tion of CJF-002 injected to establish predominance and use a relatively high molasses concentration, higher than 5%.

The fourth attempt modified the injection. The attempt injected the strain and nutrient simultaneously with an increased 10% molasses concentration. Injection of the CFJ-002 lasted for 1 week

to maximize its dominance.

As a result, the oil production doubled for more than 1 year after bacteria flooding (Fig. 6). Total water cut decreased to 65% from 88% and incremental oil recovery reached 3,392 tons.

The long-term effect of bacteria treatment indicated that the strain generated insoluble polymers to seal the high-permeability channels.

The microbial treatment also shifted the crude carbon number (Fig. 6). The produced oil became lighter than before, which indicated that the produced oil was from a previously unswept zone.

Analysis

Most microorganisms cannot survive high temperatures. It is thus believed that temperature has the most significant effect on the success of MEOR applications. In the table, of the total of 221 producers treated with bacteria, about 76% have reservoir temperatures below 55° C. (Fig. 7).

For the cases summarized in the table, two projects (30 producers) did not report the number of wells with positive responses.

A total of 119 of the 191 producers treated with 15 bacteria reported positive responses, which is a 62% overall success rate.

Fig. 7 also gives the relationship

between temperature and wells with positive responses. About 60% of the wells with positive responses have temperatures below 55° C., and almost all successful cases had temperatures below 85° C.

Based on the field data, one should apply MEOR methods to formations under 85° C., preferably below 55° C.

Bacteria also are sensitive to water salinity. Formation water generally has high salinity. Unfortunately, most of the field cases reviewed did not report water salinity.

Based on limited information, salinity less than 100,000 ppm seems a reasonable criterion.

The permeabilities in the treated reservoirs range from less than 1 md to 4,000 md, so that the success of MEOR projects does not seem to depend on reservoir permeabilities.

The treated wells often had high, more the 75%, water cuts and low producing rates.

Another important consideration is the mechanisms contributing to a success MEOR applications. Some field cases reported reductions in interfacial tension, which indicates generation of biosurfactant by microbes. Moreover, some cases reported an increase in injection pressure and alteration of injection profile. This indicates some formations' plugging and injected water entering a new interval.

No field case reported a significant increase in gas production. Gas production, therefore, is unlikely a major contributor to enhanced oil recovery.

Another proposed MEOR mechanism is wettability change. Core measurements in the laboratory are the bases of wettability values. These measurements are taken normally in the early stage of field development. Wettability change, therefore, is almost impossible to monitor or verify after the field is on production.

The dominant MEOR mechanisms may be interfacial tension reduction and selective plugging. As stated in Part 1 of this series, most interfacial tension measurements in the reservoir with

biosurfactant were above 1 mN/m. This value is not low enough to mobilize residual oil, and the biosurfactants in reservoirs are much more diluted than in the laboratory. The effectiveness of interfacial tension reduction is, therefore, limited.

Porous rock contains large pores (pore bodies) and small pores (pore throats). Pore throats often have sizes in the micron range. The microbes for MEOR often are about 1 μm in size.

While flowing in porous rock, pore throats can easily capture the microbes. After the bacteria plugs the small pores, injected water may divert to new intervals. This can explain the changes in oil properties and the water injection profile.

The reduction in interfacial tension may not be less effective than selective plugging in improving recovery. ♦

References

1. Karim, M., et al., "Microbial enhanced oil recovery technology in Bokor field Sarawak," Paper No. SPE 72125, SPE Asia Pacific Improved Oil Recovery Conference, Kuala Lumpur, Oct. 6-9, 2001.
2. Brown, L., et al., "Slowing production decline and extending the economic life of an oil field: new MEOR technology," SPE Reservoir Evaluation and Engineering, February 2002, pp. 33-41.
3. Maure, M.A., et al., "Microbial enhanced oil recovery pilot test in Piedras Coloradas field Argentina," Paper No. SPE 53715, SPE Latin America and Caribbean Petroleum Engineering Conference, Caracas, Apr. 21-23, 1999.
4. Strappa, L.A., et al., "A novel and successful MEOR pilot project in a strong water-drive reservoir," Paper No. SPE 89456, SPE/DOE 14th Symposium on Improved Oil Recovery, Tulsa, Apr. 17-21, 2004.
5. Deng, D., "Systematic extensive laboratory studies of microbial EOR mechanisms and microbial EOR application results in Changqing oil field," Paper No. SPE 54380, SPE Asia-Pacific Improved Oil Recovery Conference,

Jakarta, Apr. 20-22, 1999.

6. Wang, L., et al., "Indigenous MEOR in Shan 12 Block," Petroleum Geology and Recovery Factor, (in Chinese), Vol. 13, No. 3, 2006, pp. 82-84.

7. Zhao, H., et al., "Field pilot of microbial flooding in high temperature and high salt reservoirs," Paper No., SPE 95360, SPE ATCE, Oct. 9-13, 2005.

8. Liu, J., et al., "The field pilot of microbial enhanced oil recovery in a high temperature petroleum reservoir," Journal of Petroleum Science and Engineering, Vol. 48, 2005, pp. 265-71.

9. Hou, Z., et al., "The application of hydrocarbon degrading bacteria in Daqing's low permeability, high paraffin content oilfields," Paper No. SPE 114344, SPE/DOE Improved Oil Recovery Symposium, Tulsa, Apr. 20-23, 2008.

10. Fujiwara, K., et al., "Biotechnological approach for development of microbial enhanced oil recovery technique," Studies in Surface Science and Catalysis 151, Vazquez-Duhalt, R., and Quintero-Ramirez, R., editors. Chapter 15, 2004, pp. 405-45.

PROCESSING

The many uncertainties surrounding forecasts of US gasoline demand for the most part relate to predicting economic activity and industry fundamentals.

Further complicating the forecasting exercise are the initiatives of the administration of US President

Barack Obama. Generally designed to reduce greenhouse gas emissions, these initiatives result in reduced motor-fuel demand and a greater reliance on biofuels.

Exacerbating these demand-side pressures will be completion in the next few years of several refinery expansions developed in response to expected shortfalls in US gasoline supply. These developments lead to a growing likelihood that petroleum-based gasoline demand may have peaked in the US at the same time that domestic and offshore supply increases—adding pressure on margins and prices and seriously challenging US refiners.

To quantify these challenges, Turner, Mason & Co., Dallas, developed five cases with varying assumptions related to implementation of the biofuels mandate and corporate average fuel economy standard changes as they affect gasoline

demand and import levels (Fig. 1).

All cases show long-haul imports will continue to be required to meet US gasoline demand for the next 4 years. By 2014, however, these imports begin to fall, and by 2017 all cases but one show long-haul imports no longer necessary to meet projected US demand.

As gasoline demand continues to lag projected US production (including short-haul imports), capacity rationalization will be required among refineries making up the US domestic and short-haul systems.

CAFE; RFS2

Spurred by rising energy prices, the US Congress in 2007 passed the Energy Security and Independence Act that raised the automotive fleet target for CAFE to 35 mpg in 2020. Recent new-car production has been around 25 mpg, according to calculations by Turner, Mason.

In May 2009, President Obama increased the target to 35.5 mpg and advanced the target date 4 years to 2016. In the same month, he reaffirmed support for renewable fuels and the US Environmental Protection Agency offered clarifying language to the previous but less-defined 2007 program (renewable fuel standard; RFS1).

The current program mandates a total of 36 billion gal of renewable fuels in 2022 with graduated targets

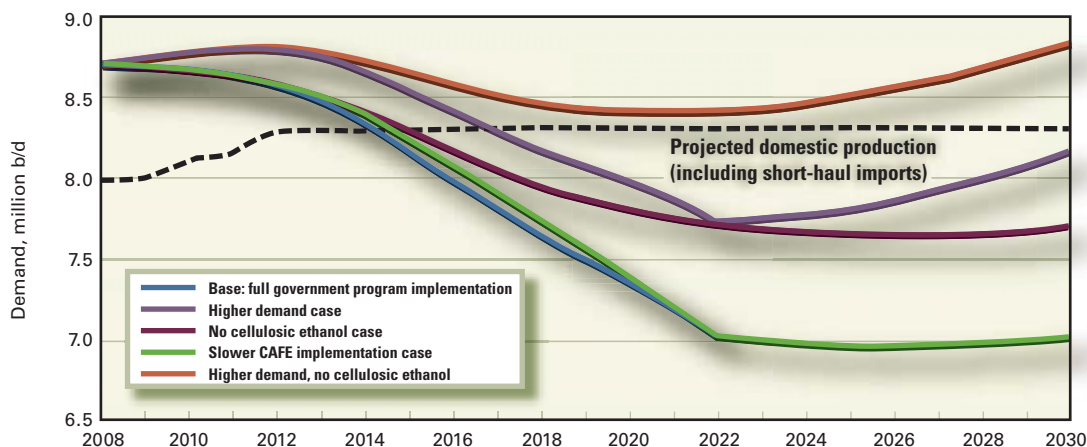
Analysis foresees decline in US gasoline imports

John R. Auers
John M. Mayes
Turner, Mason & Co.
Dallas



US GASOLINE DEMAND CASES

Fig. 1



for each preceding year. Of this total, 1 billion gal is to be biodiesel, 15 billion gal will be conventional ethanol (from corn or other renewable sources), 16 billion gal are to be cellulosic biofuels (presumably cellulosic ethanol), with the remaining 4 billion gal being from other advanced biofuels (anything other than ethanol from corn).

Gasoline supply

While changes in the regulatory environment are resulting in lower gasoline demand, refinery expansions will add 341,000 b/d of new gasoline production capacity by 2015. The two largest, Motiva in Port Arthur and Marathon in Garyville, will add 195,000 b/d (OGJ Online, Mar. 8, 2009; June 22, 2009).

In addition, as the dieselization of transportation fuels in Europe continues and export-oriented refineries in India, the Middle East, and other parts of the world are constructed, significant offshore supply will have to be absorbed worldwide.

Model basis

To estimate the effects of the new initiatives, Turner, Mason recently ran its gasoline demand forecasting model to assist in preparation of its biennial Outlook and other industry analyses. While the components of the ramp-up of the RFS2 ethanol mandate and the new refinery unit additions were easy to model, the CAFE increases proved more difficult.

There are two primary relevant variables in measuring the effects of the CAFE changes:

1. The vehicle-miles traveled by the automotive fleet.
2. The changes of the efficiency of the fleet in miles-per-gallon.

Fig. 2 shows the historical VMT. The factors influencing VMT include overall economic activity, absolute price levels of gasoline, and population/vehicle growth. Over the entire 17-year period, VMT rose at 1.7%/year. High gasoline prices 2005-08 reduced VMT growth to less than 1.0% in each of 2005, 2006,

known, they only represent new-vehicle sales. Calculating the annual improvements for the entire automotive fleet required developing a historical correlation that included the ever-changing age of the fleet. The best historical information available proved to be the annual R.L. Polk survey that reports the median age for cars and light trucks (Fig. 3).

The median ages have generally risen over the last 7 years and are currently at 9.4 years for cars and 7.5 years for light trucks. Using these parameters, Turner, Mason constructed a model that gradually incorporated the new CAFE standards into the existing automotive fleet under various aging patterns.

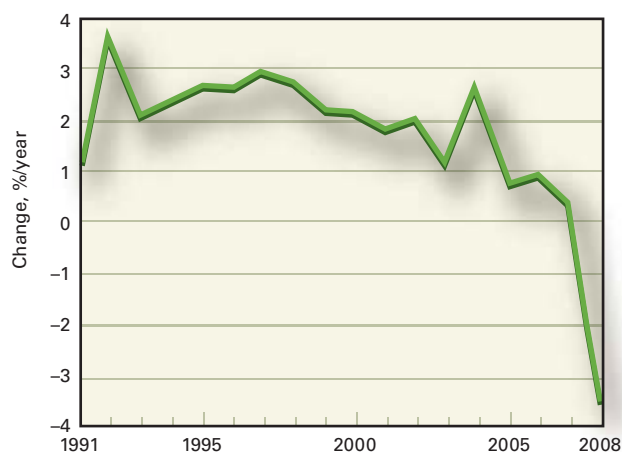
Adjusting each of these variables—VMT, CAFE implementation, change in age of the automotive fleet, and various cases for implementation of the RFS2 program—allows the model to compute “neat” gasoline demand (no ethanol) under a wide range of scenarios. Neat gasoline is first computed because it is the fuel used for CAFE purposes.

Once neat gasoline demand is determined (the result of increases in the VMT and CAFE), the ethanol volumes adjusted to their neat gasoline equivalents (66% based on btu value) are subtracted to yield the remaining fuel demand from petroleum.

The model assumes the refining contribution base is the 2008 volume that is computed from the Energy Information Administration and then adjusted for new refinery production capabilities. Remaining demand is met through imports.

The purpose of the model was to calculate quickly the effects of multiple

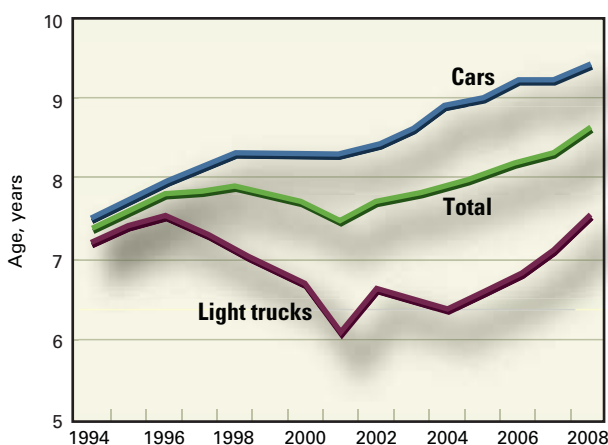
US VEHICLE-MILES TRAVELED



Source: US Department of Transportation

Fig. 2

MEDIAN AGE OF US AUTOMOTIVE FLEET



Source: R.L. Polk & Co., Southfield, Mich.

Fig. 3

and 2007 and, along with the recession, caused the steep drop of 3.4% in 2008.

With the inclusion of these low-growth years, the average VMT growth for the past 10-year period (1998-2008) is less than 1.1%/year.

While the annual CAFE increases are

PROCESSING

GASOLINE MODEL CASE ASSUMPTIONS

Table 1

Case	— Vehicle-miles traveled —		RFS2 cellulosic, %	CAFE, %	Median age of fleet, years Cars/trucks
	Increase, %/year	Basis			
I	1.06	1999-2008 avg.	100	100	Flat @ 9.4/7.5
II	1.69	1998-2007 avg.	100	100	Flat @ 9.4/7.5
III	1.06	1999-2008 avg.	—	100	Flat @ 9.4/7.5
IV	1.06	1999-2008 avg.	100	100	Rise to 10.5/8.6
V	1.69	1998-2007 avg.	—	100	Flat @ 9.4/7.5

GASOLINE MODEL RESULTS

Table 2

Case	— Neat gasoline demand, 1,000 b/d —			Elimination of long- haul imports, year	Surplus gasoline — capacity, 1,000 b/d —	
	2008	2015	2020		2015	2020
I	8,765	8,667	8,265	2014	—	943
II	8,765	9,038	8,879	2017	—	330
III	8,765	8,667	8,265	2015	—	491
IV	8,765	8,740	8,318	2015	—	891
V	8,765	9,038	8,879	—	—	—

scenarios. Table 1 details the assumptions of the five cases and Table 2 their results. All of the cases assume full implementation of CAFE; and:

- Case I: Full implementation of RFS2, VMT growth rate at the average of the last 10 years, and constant median age of the auto fleet.
- Case II: Case I with higher VMT basis by excluding 2008 and shifting the 10-year average to 1998-2007.
- Case III: Case I with no cellulosic volume (16 billion gal) in RFS2.
- Case IV: Case I with higher median age of auto fleet to reflect customer resistance to higher mileage but smaller vehicles.
- Case V: Case II (higher VMT basis) with no cellulosic volume.

The critical component in the results is the level of US gasoline production and the required imports necessary to balance.

Gasoline imports averaged 1,091,000 b/d in 2008, according to EIA. These imports fall into two distinct classifications: short haul and long haul.

Short-haul imports are produced close to the US (Virgin Islands, Caribbean, Canada, etc.) and can be viewed as an extension of the US domestic refining system. They comprise about 33% (358,000 b/d) of the total.

Long-haul imports are generally from Europe and presumably must

be supported by a necessary location differential to justify their movement. If long-haul imports (733,000 b/d) are eliminated and do not figure the incremental price for gasoline, refining margins would likely narrow.

Model results

All the cases result in declining petroleum-based gasoline demand during the phase-in periods for CAFE and biofuels (through at least 2022). This is a result of a decline in consumer demand brought on either by CAFE increases more than offsetting VMT gains or by the substitution of ethanol for neat gasoline.

In the first four cases, imports (both long haul and short haul) are eliminated and surplus gasoline capacity is created by 2017 at the latest. Only in Case V, which assumes more bullish growth in VMT along with no production of cellulosic ethanol, does demand continue to exceed total domestic production (including short-haul imports).

If RFS2 and CAFE are fully implemented and VMT matches the last 10 years (Case I), long-haul imports will be eliminated by 2014 and 943,000 b/d of surplus gasoline capacity will exist by 2020.

A more robust VMT growth assumption (Case II) eliminates long-haul imports by 2017, and 330,000 b/d of

surplus gasoline capacity will exist by 2020. Cases III (elimination of cellulosic ethanol) and IV (slower auto fleet turnover) both result in the need for long-haul imports going away by 2015, although Case IV results in a much higher level of surplus gasoline in 2020 (891,000 b/d vs. 491,000 b/d).

The effects of reducing US gasoline demand are multifaceted. As demand declines, long-haul imports are the first to be reduced. This occurs when the over supply of gasoline depresses prices and margins to a level that will no lon-

The authors

John R. Auers (jauers@turnermason.com) is a senior vice-president with Turner, Mason & Co., Dallas. He is the team leader of the Outlook, a biennial report that forecasts supply, demand, and pricing for crude oils and petroleum products worldwide. He also leads assignments in the areas of refining economics and planning, LP modeling, downstream asset valuation, crude oil valuation and capital investment and strategic planning. Auers joined the firm in 1987 after 7 years with Exxon Corp., with which he held various positions at its Baytown, Tex., refinery. He holds a BS (1980) in chemical engineering from the University of Nebraska and an MBA (1984) from the University of Houston-Clear Lake. Auers is a licensed professional engineer in Texas and is a member of TSPE and AIChE.



John Mayes (jmayes@turnermason.com) is a senior consultant with Turner, Mason & Co. and specializes in studies and support for the refining industry and other downstream activities. He holds a BS in chemical engineering from Texas A&M University and was previously employed in various refining, supply, and marketing positions with Fina, Ultramar, and BP.



ger justify their movement.

This level may be deceptively low in that European refiners may prefer to sell gasoline at a loss in the US (large gasoline market) than to distress-sell the product in Europe (smaller gasoline market). This forces prices steadily lower and, if unabated, to a point the European refiner must either cut runs or completely shut down.

This condition illustrates how declining gasoline demand in the US will most likely be felt first in Europe due to its refining-complexity disadvantage vs. the US.

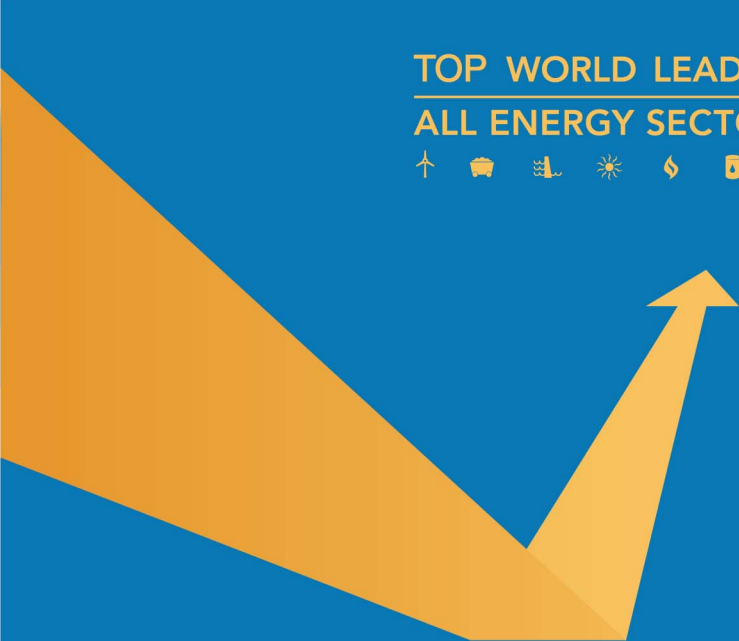
If over-supply grows more acute and all long-haul imports have been eliminated, margins will decline even further as the US refining industry (and short-haul suppliers) must rationalize the imbalance.

To do this, new export markets can be developed, domestic throughput can be reduced, refineries can be closed, or more likely a combination of these actions will be taken to bring supply into balance with the reduced level of demand.


In any case, lower refining margins will likely result in this environment, in which the US moves from being a net importer to a net exporter of gasoline. ♦

TOP WORLD LEADERS
ALL ENERGY SECTORS





XXIst World Energy Congress **WEC**
 September 12 to 16
MONTREAL
2010




BOOK YOUR
EXHIBIT SPACE TODAY!

wecmontreal2010.ca/exhibit

FOR EXHIBIT INFORMATION, PLEASE CONTACT:

Bill Langenheim
POWER - NORTH AMERICA
P: + 1 918.832.9256
E: bill@pennwell.com

Kristin Stavinoha
PETROLRUM - NORTH AMERICA
P: +1 713.963.6283
E: kristins@pennwell.com

Linda Fransson
POWER / PETROLEUM - INTERNATIONAL
P: +44 (0) 1992.656.665
E: lindaf@pennwell.com

Svetlana Strukova
POWER / PETROLEUM - RUSSIA
P: +7 495.580.3201
E: svetlanas@pennwell.com

Hosted By:



Exhibition Managed By:

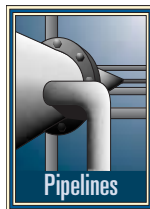


Sponsored By:



TRANSPORTATION

GDF Suez's wholly owned gas transmission system operator, GRTgaz, completed its first project with GE Oil & Gas' New MagneScan in-line inspection system, a next-generation magnetic flux leakage device allowing operators to map pipelines as small as 6-in. OD while also inspecting



metal loss associated with dents and under casings.

The system is designed to detect and locate areas of metal loss in both liquid and gas pipelines $\geq 5\%$ WT with 90% probability and in practice can detect even smaller metal losses. Sizing accuracy is $\pm 8\%$ at 80% certainty. Full specification can be achieved up to a maximum tool speed of 11 mph, with an operating temperature of -4° to 100° F, up to a maximum pressure of 2,175 psia. The 6-in. diameter version of the tool is 4.5 ft long and can negotiate 1.5 nominal diameter-radius back-to-back bends.

The new system includes 216 low noise Hall-effect sensors in 72 tracks, taking readings on axial, radial, and transverse vectors every 2 mm. This new 3-D configuration covers 100% of the pipe circumference and optimizes defect-sizing accuracy for width, length, and depth.

The system simultaneously maps the pipeline and checks it for corrosion, with high resolution MFL sensors delivering high-quality data to both identify and plot metal loss and perform geographic information systems analysis. It also uses 24 high-resolution caliper sensors to detect and profile dents for accurate assessment of severity.

The tool uses a set of secondary sen-

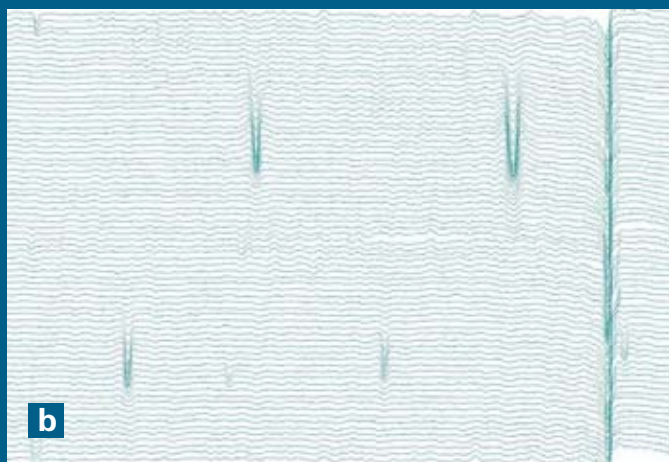
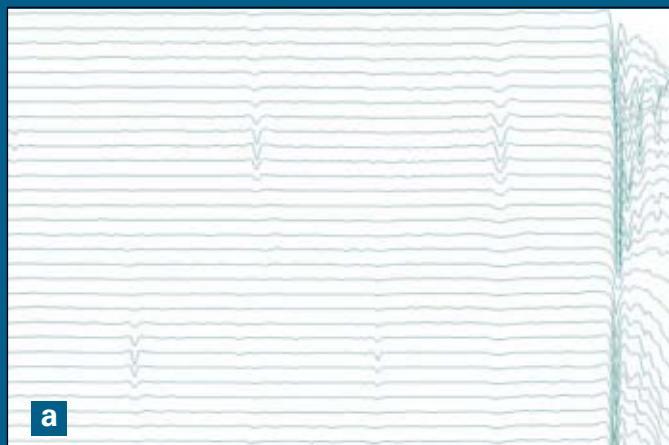
New MFL technology completes single-run multifeature inspections

Martin Bluck
GE Oil & Gas, PII Pipeline Solutions
Cramlington, UK

for metal loss and geometry features.

GRTgaz successfully completed its advanced MFL inspection in spring 2009 on a 6-in., 24-mile line in Normandy, France. Built in 1965 northwest of Paris, the pipeline is part of GRTgaz's 32,000-km gas pipeline system in France.

The new system is the first able to inspect pipelines—of varying diameters and sharp bends—for multiple types of features in a single run. The system records the position of: dents, ovalities, and bends; internal and external pitting and general corrosion on the pipe body; metal loss in the vicinity of welds; and



These images demonstrate the new tool's higher resolution depiction of metal loss. Image a shows the reading of a traditional MFL tool with 30 tracks recorded every 3.3 mm in a 6-in. OD pipeline. Image b shows the new tool's reading from the same pipe segment, gathered with 72 tracks recorded every 2 mm (Fig. 1).

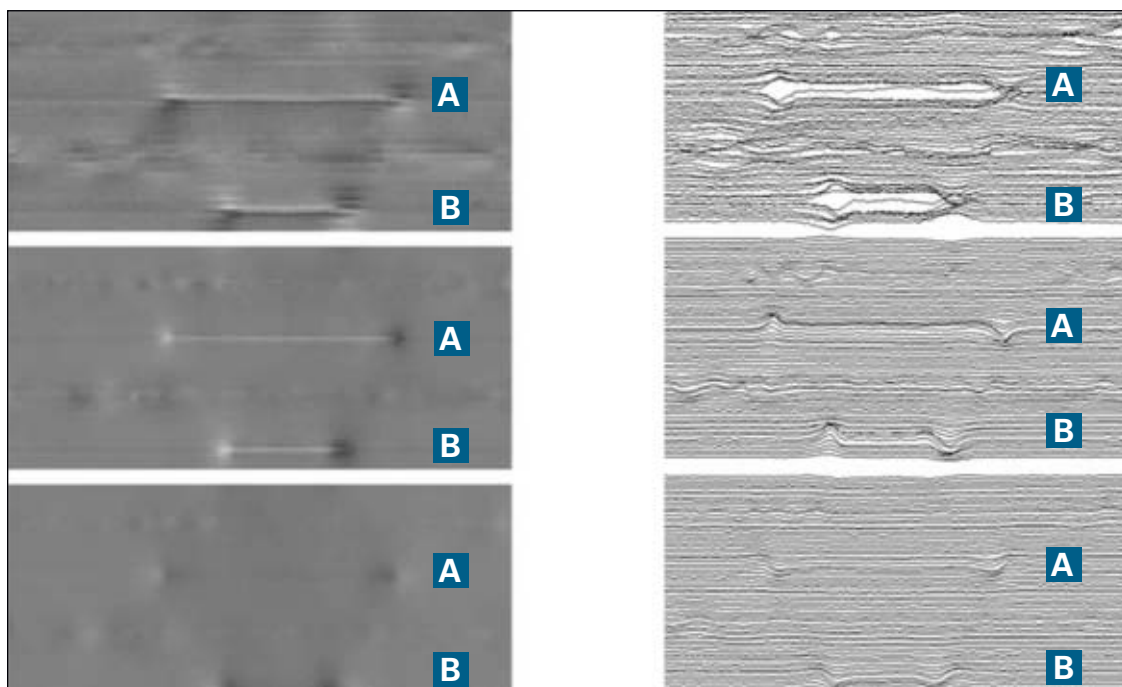
sors to discriminate between internal and external metal loss. Odometer wheels log distance traveled, while an internal pendulum records the tool's orientation in the pipeline, and a time-based marker system logs its time of passage.

Mapping data are integrated with inspection information during the run, reducing post-processing. Improved accuracy means fewer digs for operators following inspection runs, yielding savings and reduced environmental impact.

While GDF Suez's subsidiary and the technology provider originally agreed the project would include a maximum of five runs to gauge, clean, geometrically survey, inspect, and map the pipeline, completion actually took only four runs with gauge, cleaner profile, and the new MFL tool. Inspection took a single pass after initial gauging, cleaning, and running a dummy tool.

All work took place inside the Jan. 19-30 window set by GDF Suez to minimize effects on its storage facility in St. Illiers. The project also maintained strict compliance with the European Union's ATEX safety requirements, covering operations in potentially explosive atmospheres.

The technology provider delivered the full inspection report to GDF Suez within an agreed 8-week time frame. The new system allows pipeline operators to choose the level of analysis of data they wish to review upon completion of inspection and allows them to come back to the technology provider later with additional requirements for



The new tool offers improved feature visualization and identification. Defect A measures 250×15 mm, with a depth of 54% WT. Defect B is 155×15 mm and 64% WT. The new tool captured these images using triaxial readings (transverse, radial, and axial from top to bottom; Fig. 2).

more in-depth analysis leading to remediation plans.

The service determines immediate and future integrity needs by gauging criticality of identified features and developing a corresponding response schedule, focusing short-term repairs on sites of immediate risk and determining intervals for re-inspection and long-term remediation. During a re-inspection the system would assess corrosion growth and the effectiveness of remediation.

To aid data analysts in improving characterization of complex (interactive or axial) corrosion defects, the new technology presents visually powerful data derived from three magnetic fields—axial, radial, transverse. Combining these data sets achieves enhanced defect sizing specifications and improved probability of identification (Figs. 1-2).

Other deployments

In addition to GRTgaz, both Sarpom—ExxonMobil's affiliate refinery and pipelines company in Italy—and

Jayhawk Pipeline, a Midwestern US operator, deployed the new MFL technology in first-quarter 2009.

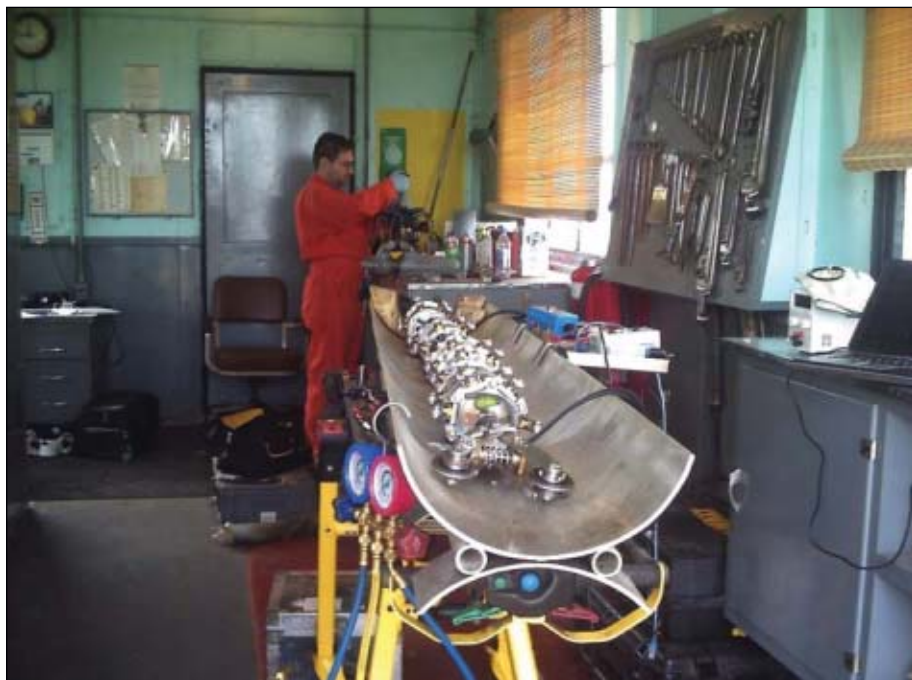
The Sarpom inspection took place on a 6-in. OD, jet-fuel pipeline spanning almost 20.5 miles, from Trecate to Malpensa intercontinental airport. The line was last inspected in 2003. Sarpom operates a network of 720 miles of liquid pipelines in Italy.

The technology provider sought to detect corrosion, dents, and bends, as well as acquire mapping coordinates. Successful inspection took just 4 hr and 45 min, with field support provided by TECMA Pipeline Services.

Inspection of the seamless steel pipeline, partially built in the early 1960s, had three priorities: reduced disruption of operations; a small system arrangement due to space restrictions at the airport; and better corrosion assessment than offered by previously available technology. Sarpom also remarked it had been waiting for credible, 6-in. OD mapping capability.

The first New MagneScan inspection

TRANSPORTATION



A technician readies the 6-in. diameter, 4.5-ft long tool for use in a segment of Jayhawk Pipeline LLC's refined products pipeline running between Kansas and Iowa (Fig. 3).

completed in North America occurred on four sections of 6-in. OD refined products pipeline between Kansas and

Iowa, spanning a total length of 227.5 miles and operated by Jayhawk Pipeline LLC, a fully owned subsidiary of Na-

tional Cooperative Refinery Association (Figs. 3-4).

NCRA operates an 85,000-b/d in McPherson, Kansas, as well the products line running from the refinery to Council Bluffs, Iowa, and inspected by the new MFL system.

The four 6-in. OD Jayhawk Pipeline segments measured 49, 60, 58, and 60.5 miles, respectively, and each run was completed in less than 24 hr in standard configuration. Low product speed inside the line required run-time at the upper specification of the tool's battery life.

The New MagneScan system launched at the International Pipeline Conference in Calgary, September 2008. Since December 2008, it has completed inspections in 6, 8, and 10-in. pipelines carrying crude oil, diesel, condensate, jet fuel, and natural gas in Australia, Canada, France, Italy, UK, and US. Numerous inspections are already scheduled for the remainder of 2009. ♦



Technicians prepare to launch the tool into one of the Jayhawk products pipeline segments (Fig. 4).



The author

Martin Bluck (martin.bluck@ge.com) is product manager metal loss, geometry, and mapping at GE Oil & Gas-PII Pipeline Solutions, based in Cramlington, UK. He has held senior positions in supply chain, business development, professional services, Six Sigma quality (master black belt), and most recently pricing and competition prior to his current role. Bluck holds an honors degree in chemical sciences (1984) earned jointly at the University of East Anglia, UK, and the University of Massachusetts.

E q u i p m e n t / S o f t w a r e / L i t e r a t u r e

**New universal ball valve lockable stop plate**

A new universal ball valve lockable stop plate features improved clearance characteristics.

These new lockable stop plates allow rotational retainers and adapters to be used directly with this firm's ball valves so equipped to clamp and retain them in compact and leak resistant assemblies against pumps, motors, actuators, filters, valves, and manifolds.

Alternatively compact in-line assemblies may be made.

Source: **Inserta**, 538 Township Line Rd., Blue Bell, PA 19422-2798.

New tool helps widen scope of 3D visualization

Newly launched TerraSpark Data Showcase is a data visualization tool designed to help seismic processing companies and data vendors communicate their products and discoveries to prospective customers.

The tool helps enable users to quickly demonstrate 3D volumes along with land grids, lease blocks, and other cultural information using a simple notebook or lap top PC. A client or prospective customer can scroll through the volumes, previewing the data before making a purchase decision and highlighting areas of interest for which they would like to purchase data.

Multiple attribute volumes can be displayed side-by-side or overlaid for easy comparison. Data security is maintained by encryption of the data before installation on a PC, and on-the-fly decryption for display in Data Showcase.

Source: **TerraSpark Geosciences LP**, 10955 Westmoor Drive, Westminster, CO 80021-2704.

New sand screen

Here's the ASW/CT premium screen, which has been developed specifically for through tubing completion applications.

Its manufacturing technology has resulted in a close tolerance method of construction that produces a slim hole screen.

This new design involves the use of diffusion-bonded sintered-laminate woven wire mesh combined with an outer perforated protective shroud over a perforated base tube. The maker has developed a process to weld the media flush-on directly to the inner perforated tube of the screen assembly. This integrated process helps enhance the screen's strength.

Source: **Alloy Screen Works Div., Alloy Machine Works Inc.**, 18102 E. Hardy Rd., Houston, TX 77073.

**ATCE 2009** »

SPE ANNUAL TECHNICAL CONFERENCE AND EXHIBITION

**New Orleans**

4-7 October 🌸 New Orleans, Louisiana, USA

Follow ATCE on [Twitter.com/SPE_ATCE](https://twitter.com/SPE_ATCE)**Register Now!**www.spe.org/atceSociety of Petroleum Engineers
www.spe.org

The Global Energy Challenge:
Reviewing the Strategies for Natural Gas

24th WGC 2009 in Argentina!

www.wgc2009.com

Online
Registration
now open!

Confirmed Keynote Speakers include:

- **Antonio Brufau**
Chairman and CEO, REPSOL YPF and Vice President, GAS NATURAL GROUP
- **Alexey B. Miller**
Deputy Chairman of the Board of Directors, Chairman of the Management Committee, GAZPROM
- **Tan Sri Dato' Seri Mohd Hassan Marican**
President and CEO, PETRONAS
- **Bernhard Reutersberg**
CEO, E.ON RUHRGAS
- **Faisal Al-Suwaidi**
President and CEO, QATARGAS OPERATING COMPANY
- **George Kirkland**
Executive Vice President, Global Upstream and Gas, CHEVRON CORPORATION
- **Tony Hayward**
Group Chief Executive, BP
- **Jean-François Cirelli**
Vice Chairman and President, GDF SUEZ
- **Thomas E. Skains**
Chairman, President and CEO, AMERICAN GAS ASSOCIATION
- **Christophe de Margerie**
Chairman and CEO, TOTAL
- **María Graças Silva Foster**
Director of Gas and Energy, PETROBRAS
- **Norio Ichino**
Chairman, THE JAPAN GAS ASSOCIATION
- **Azizolah Ramezani**
Deputy Minister and Managing Director, NATIONAL IRANIAN GAS COMPANY
- **Marcel P. Kramer**
Chairman of the Executive Board and CEO, GASUNIE



24th World Gas Conference
ARGENTINA | 2009
5-9 October

S e r v i c e s / S u p p l i e r s

Fugro Robertson,

Llandudno, UK, has appointed Barry Ringer Far East regional manager. Based in Kuala Lumpur, he will be the company's senior representative for the Asia-Pacific region. Ringer has 42 years of professional experience in the petroleum service and consultancy industry, most recently serving as Middle East regional manager and director of business development for Fugro Robertson in Abu Dhabi. He spent 15 years with Robertson Research International before it became a part of Fugro. He also worked with Baker International and EXLOG Inc.

Fugro collects, processes, and interprets data related to the surface and subsurface of the earth and sea along the coast, on land, and from the air for the oil and gas and other industries.



Ringer

Ortloff Engineers Ltd.,

Midland, Tex., has named Steve Munden a principal and manager of business development. He has nearly 40 years of experience in the gas processing and refining industries and their related fields. His background includes plant design, equipment specification, quality control, construction supervision, and checkout and start-up of a variety of facilities. Additionally, he has been involved in the business of supplying goods and services to the gas processing and refining industries. Munden is the recipient of the Gas Processors Association's outstanding service award for 2009 and is a past president of the National Gas Processors Suppliers Association.

Ortloff provides licenses for its patented technologies in cryogenic gas processing and sulfur recovery, technical support for the licensing effort, and engineering and consulting assignments for process plant contractors and operators.

Jackup Structures Alliances Inc.,

Houston, has announced that Robert William Fogal Jr., the company's vice-president of business development, was appointed an independent non-executive director of the TSC Offshore Group Ltd. board for a 3-year term. Fogal has more than 50 years of experience in offshore drilling rig construction. At JSA, he is involved in sales and business development for the manufacture of critical niche components for offshore drilling rigs and liftboats, as well as other services to the offshore industry.

JSA manufactures and supplies complex structures for jack up drilling rigs, including jack up leg gear racks, chords, bracings, and complete jack up leg sections. TSC provides comprehensive drilling equipment, mechanical handling equipment, solids control equipment, rig power and drives, and tensioning and compensation systems for semisubmersible rigs and control drill ships, as well as jacking systems and rack materials for jack ups.



DEEP OFFSHORE
TECHNOLOGY™
INTERNATIONAL

February 2-4, 2010

Houston, Texas USA » George R. Brown Convention Center

www.dotinternational.net

Exclusively Offshore

Deep Offshore Technology International Conference & Exhibition networking opportunities puts your company in front of senior level decision makers within operating and engineering companies which focus exclusively on deepwater exploration and production.

These attendees are an extremely knowledgeable and highly targeted audience who concentrate on the perplexities of moving into deep and ultra-deep waters. When every marketing dollar counts, leading companies rely on DOT for the most extensive reach of senior level management responsible for buying decisions.

Plan today to get in front of a targeted group of these industry professionals.

Exhibitor and Sponsorship Sales:

Jane Bailey

UK & Northern Europe

Phone: +44 (0) 1992 656 651

Fax: +44 (0) 1992 656 700

janeb@pennwell.com

Sue Neighbors

Americas

Phone: +1 713 963 6256

Fax: +1 713 963 6212

sneighbors@pennwell.com

Ana Monteiro

Southern Europe

Phone: +44 (0) 1992 656 658

Fax: +44 (0) 1992 656 700

anam@pennwell.com

Michael Yee

Asia Pacific

Phone: +65 9616 8080

Fax: +65 6734 0655

yfye@singnet.com.sg

Advisory Board - 2010

2H Offshore - David Walters

Anadarko Petroleum Corp. - Matt Lamey

Baker Hughes - David Bilberry

BP E&P Inc. - Kevin Kennelley

Chevron - Jen-hwa Chen

Consultant - Bob Lewis

ExxonMobil - Todd Stevens

FloaTEC - John Murray

HESS Corporation - James Britch

INTECSEA - WhorleyParsons Group - Bob Kipp

INTECSEA - WhorleyParsons Group - Uri Nooteboom

KBR - Derek Disney

KBR/Granherne Americas - Richard D'Souza

MCS - Kieran Kavanagh

Offshore - Gene Klierer

PennWell Corporation - Eldon Ball

Schlumberger - Mark Alden

SES Subsea Engineering Solutions, Inc. - Steve Bledsoe

Shell E&P Company - Bill Henry

Spitzer Industries, Inc. - Mike McEvilly

SPT Group - Lee Norris

SSP Offshore Inc. - Nico Vandeworm

Subsea 7 - Ian Cobban

TOTAL E&P USA - Ronny Hanssen

Owned & Produced by: Flagship Media Sponsors:



Offshore



OIL & GAS
FINANCIAL
JOURNAL

Oil, Gas & Petrochem
EQUIPMENT



Supporting Organization: Sponsored By:



Bennett & Associates



INTECSEA
WorleyParsons Group

Reserve Your Booth Space Today!

Statistics

IMPORTS OF CRUDE AND PRODUCTS

	— Districts 1-4 —		— District 5 —		— Total US —		
	8-7 2009	7-31 2009	8-7 2009	7-31 2009	8-7 2009	7-31 2009	*8-8 2008
	1,000 b/d						
Total motor gasoline	899	985	75	36	974	1,021	785
Mo. gas. blending comp.....	724	709	23	36	747	745	675
Distillate	140	141	22	0	162	141	136
Residual	299	77	5	0	304	77	311
Jet fuel-kerosine	57	39	19	122	76	161	74
Propane-propylene	80	83	3	3	83	86	158
Other	(112)	87	37	25	(75)	112	463
Total products.....	2,087	2,121	184	222	2,271	2,343	2,602
Total crude	8,538	8,166	992	1,121	9,530	9,287	9,655
Total imports	10,625	10,287	1,176	1,343	11,801	11,630	12,257

*Revised.
Source: US Energy Information Administration
Data available in OGJ Online Research Center.

Additional analysis of market trends is available through **OGJ Online**, *Oil & Gas Journal's* electronic information source, at <http://www.ogjonline.com>.



OGJ CRACK SPREAD

	*8-14-09	*8-15-08	Change	Change
	\$/bbl			%
SPOT PRICES				
Product value	80.28	123.58	-43.30	-35.0
Brent crude	72.57	111.27	-38.70	-34.8
Crack spread	7.71	12.32	-4.60	-37.4

FUTURES MARKET PRICES

	*8-14-09	*8-15-08	Change	Change
	\$/bbl			%
One month				
Product value	82.50	124.89	-42.39	-33.9
Light sweet crude	69.65	113.77	-44.12	-38.8
Crack spread	12.85	10.71	2.14	20.0
Six month				
Product value	82.66	126.52	-43.87	-34.7
Light sweet crude	75.20	115.67	-40.48	-35.0
Crack spread	7.46	10.58	-3.12	-29.5

*Average for week ending.
Source: Oil & Gas Journal
Data available in OGJ Online Research Center.

PURVIN & GERTZ LNG NETBACKS—AUG. 14, 2009

Receiving terminal	Liquefaction plant					
	Algeria	Malaysia	Nigeria	Austr. NW Shelf	Qatar	Trinidad
	\$/MMBtu					
Barcelona	6.04	3.83	5.04	3.73	4.38	4.97
Everett	2.74	0.86	2.40	0.97	1.30	3.00
Isle of Grain	2.56	1.14	2.00	1.12	1.28	2.02
Lake Charles	0.89	-0.41	0.68	-0.30	-0.23	1.44
Sodegaura	4.15	6.27	4.41	5.99	5.31	3.54
Zeebrugge	4.86	2.91	4.24	2.77	3.39	4.29

Definitions, see OGJ Apr. 9, 2007, p. 57.
Source: Purvin & Gertz Inc.
Data available in OGJ Online Research Center.

CRUDE AND PRODUCT STOCKS

District	Crude oil	— Motor gasoline —			— Fuel oils —		Propane-propylene
		Total	Blending comp. ¹	Jet fuel, kerosine 1,000 bbl	Distillate	Residual	
PADD 1	13,976	56,505	38,145	12,322	68,292	13,308	4,639
PADD 2	86,917	52,561	25,574	8,079	33,014	1,240	29,619
PADD 3	182,517	69,367	39,166	16,155	45,603	15,925	33,402
PADD 4	16,062	5,765	1,774	567	3,040	228	11,763
PADD 5	52,557	27,733	21,781	9,320	12,318	3,913	—
Aug. 7, 2009.....	352,029	211,931	126,440	46,443	162,267	34,614	69,423
July 31, 2009.....	349,510	212,858	127,236	46,613	161,481	33,588	68,955
Aug. 8, 2008².....	296,547	202,822	104,495	40,786	131,587	36,435	49,186

¹Includes PADD 5. ²Revised.
Source: US Energy Information Administration
Data available in OGJ Online Research Center.

REFINERY REPORT—AUG. 7, 2009

District	REFINERY OPERATIONS		REFINERY OUTPUT				
	Gross inputs	Crude oil inputs	Total motor gasoline	Jet fuel, kerosine	Fuel oils		Propane-propylene
	1,000 b/d		1,000 b/d		Distillate	Residual	
PADD 1	1,397	1,380	2,377	87	398	113	57
PADD 2	3,187	3,176	2,046	224	859	51	267
PADD 3	7,215	7,026	2,613	694	1,921	345	697
PADD 4	513	507	315	29	181	12	'65
PADD 5	2,440	2,276	1,509	382	464	88	—
Aug. 7, 2009.....	14,752	14,365	8,860	1,416	3,823	609	1,086
July 31, 2009.....	14,940	14,434	9,075	1,473	3,798	565	1,019
Aug. 8, 2008².....	15,124	14,823	8,852	1,561	4,341	585	1,025
	17,672 Operable capacity		83.5% utilization rate				

¹Includes PADD 5. ²Revised.
Source: US Energy Information Administration
Data available in OGJ Online Research Center.

OGJ GASOLINE PRICES

	Price ex tax 8-12-09	Pump price* 8-12-09 c/gal	Pump price 8-13-08
(Approx. prices for self-service unleaded gasoline)			
Atlanta.....	195.2	241.7	383.4
Baltimore.....	197.7	239.6	380.6
Boston.....	201.9	243.8	382.7
Buffalo.....	193.8	254.7	379.3
Miami.....	208.1	259.7	380.1
Newark.....	198.1	230.7	371.8
New York.....	188.6	249.5	378.6
Norfolk.....	197.3	235.7	374.4
Philadelphia.....	200.0	250.7	380.8
Pittsburgh.....	198.9	249.6	378.7
Wash., DC.....	212.4	250.8	381.9
PAD I avg.....	199.3	246.0	379.3
Chicago.....	215.3	279.7	403.0
Cleveland.....	216.3	262.7	368.3
Des Moines.....	213.7	254.1	362.4
Detroit.....	219.7	279.1	378.2
Indianapolis.....	206.3	265.7	368.2
Kansas City.....	200.0	236.0	361.9
Louisville.....	220.6	261.5	372.2
Memphis.....	199.7	239.5	361.2
Milwaukee.....	214.7	266.0	377.3
Minn.-St. Paul.....	214.9	258.9	369.2
Oklahoma City.....	193.3	228.7	356.8
Omaha.....	189.4	234.7	371.6
St. Louis.....	196.7	232.7	363.2
Tulsa.....	189.7	225.1	354.9
Wichita.....	195.6	239.0	357.9
PAD II avg.....	205.7	250.9	368.4
Albuquerque.....	198.5	234.9	362.0
Birmingham.....	200.2	239.5	368.5
Dallas-Fort Worth.....	203.3	241.7	367.4
Houston.....	198.5	236.9	365.0
Little Rock.....	194.7	234.9	368.5
New Orleans.....	201.5	239.9	368.5
San Antonio.....	205.4	243.8	367.3
PAD III avg.....	200.3	238.8	366.8
Cheyenne.....	214.7	247.1	371.7
Denver.....	215.4	255.8	399.3
Salt Lake City.....	207.2	250.1	398.1
PAD IV avg.....	212.4	251.0	389.7
Los Angeles.....	223.5	290.6	411.8
Phoenix.....	213.3	250.7	378.8
Portland.....	229.2	272.6	386.8
San Diego.....	225.5	292.6	409.9
San Francisco.....	233.1	300.2	420.7
Seattle.....	230.7	286.6	395.8
PAD V avg.....	225.9	282.2	400.7
Week's avg.....	206.5	252.1	377.1
July avg.....	205.6	251.2	405.7
June avg.....	214.6	260.2	404.2
2009 to date.....	171.5	217.1	—
2008 to date.....	308.0	351.8	—

*Includes state and federal motor fuel taxes and state sales tax. Local governments may impose additional taxes. Source: Oil & Gas Journal. Data available in OGJ Online Research Center.

BAKER HUGHES RIG COUNT

	8-14-09	8-15-08
Alabama.....	2	8
Alaska.....	9	10
Arkansas.....	45	54
California.....	20	45
Land.....	20	45
Offshore.....	0	0
Colorado.....	44	120
Florida.....	2	2
Illinois.....	2	1
Indiana.....	1	2
Kansas.....	23	10
Kentucky.....	10	11
Louisiana.....	136	190
N. Land.....	89	80
S. Inland waters.....	8	28
S. Land.....	13	29
Offshore.....	26	53
Maryland.....	0	0
Michigan.....	0	2
Mississippi.....	15	14
Montana.....	1	13
Nebraska.....	0	1
New Mexico.....	42	81
New York.....	2	7
North Dakota.....	44	75
Ohio.....	8	12
Oklahoma.....	76	208
Pennsylvania.....	50	26
South Dakota.....	1	2
Texas.....	355	931
Offshore.....	3	7
Inland waters.....	0	1
Dist. 1.....	17	18
Dist. 2.....	10	38
Dist. 3.....	33	63
Dist. 4.....	29	95
Dist. 5.....	74	181
Dist. 6.....	47	126
Dist. 7B.....	12	31
Dist. 7C.....	17	72
Dist. 8.....	57	134
Dist. 8A.....	12	34
Dist. 9.....	19	40
Dist. 10.....	25	91
Utah.....	17	50
West Virginia.....	21	26
Wyoming.....	35	77
Others—HI-1; NV-1; VA-5.....	7	12
Total US.....	968	1,990
Total Canada.....	170	426
Grand total.....	1,138	2,416
US Oil rigs.....	272	395
US Gas rigs.....	688	1,586
Total US offshore.....	31	66
Total US cum. avg. YTD.....	1,097	1,845

Rotary rigs from spudding in to total depth. Definitions, see OGJ Sept. 18, 2006, p. 42. Source: Baker Hughes Inc. Data available in OGJ Online Research Center.

SMITH RIG COUNT

Proposed depth, ft	Rig count	8-14-09 Percent footage*	Rig count	8-15-08 Percent footage*
0-2,500	40	10.0	87	3.4
2,501-5,000	72	70.8	140	47.1
5,001-7,500	115	20.8	236	13.9
7,501-10,000	193	5.6	468	2.9
10,001-12,500	198	12.6	468	1.9
12,501-15,000	137	—	334	—
15,001-17,500	128	—	148	—
17,501-20,000	48	—	93	—
20,001-over	33	—	32	—
Total	964	11.9	2,006	6.2
INLAND	12	—	32	—
LAND	914	—	1,917	—
OFFSHORE	38	—	57	—

*Rigs employed under footage contracts. Definitions, see OGJ Sept. 18, 2006, p. 42. Source: Smith International Inc. Data available in OGJ Online Research Center.

OGJ PRODUCTION REPORT

	8-14-09	8-15-08
	1,000 b/d	
(Crude oil and lease condensate)		
Alabama.....	18	19
Alaska.....	640	582
California.....	641	654
Colorado.....	61	65
Florida.....	5	5
Illinois.....	27	26
Kansas.....	101	108
Louisiana.....	1,402	1,272
Michigan.....	15	17
Mississippi.....	60	59
Montana.....	88	84
New Mexico.....	162	163
North Dakota.....	181	176
Oklahoma.....	176	151
Texas.....	1,316	1,327
Utah.....	58	62
Wyoming.....	147	145
All others.....	65	74
Total.....	5,163	4,989

¹OGJ estimate. ²Revised. Source: Oil & Gas Journal. Data available in OGJ Online Research Center.

US CRUDE PRICES

	8-14-09 \$/bbl*
Alaska-North Slope 27°.....	65.67
South Louisiana Sweet.....	68.00
California-Kern River 13°.....	58.95
Lost Hills 30°.....	67.35
Wyoming Sweet.....	58.01
East Texas Sweet.....	63.50
West Texas Sour 34°.....	58.00
West Texas Intermediate.....	64.00
Oklahoma Sweet.....	64.00
Texas Upper Gulf Coast.....	57.00
Michigan Sour.....	56.00
Kansas Common.....	63.00
North Dakota Sweet.....	53.50

*Current major refiner's posted prices except North Slope lags 2 months. 40° gravity crude unless differing gravity is shown. Source: Oil & Gas Journal. Data available in OGJ Online Research Center.

WORLD CRUDE PRICES

	8-7-09 \$/bbl ¹
United Kingdom-Brent 38°.....	72.89
Russia-Urals 32°.....	72.20
Saudi Light 34°.....	71.58
Dubai Fateh 32°.....	71.06
Algeria Saharan 44°.....	72.94
Nigeria-Bonny Light 37°.....	74.45
Indonesia-Minas 34°.....	74.89
Venezuela-Tia Juana Light 31°.....	71.63
Mexico-Isthmus 33°.....	71.52
OPEC basket.....	72.33
Total OPEC ²	72.11
Total non-OPEC ²	70.76
Total world ²	71.52
US imports ³	68.87

¹Estimated contract prices. ²Average price (FOB) weighted by estimated export volume. ³Average price (FOB) weighted by estimated import volume. Source: DOE Weekly Petroleum Status Report. Data available in OGJ Online Research Center.

US NATURAL GAS STORAGE¹

	8-7-09	7-31-09	8-7-08	Change, %
	bcf			
Producing region.....	1,073	1,068	737	45.6
Consuming region east.....	1,635	1,579	1,465	11.6
Consuming region west.....	444	442	357	24.4
Total US.....	3,152	3,089	2,559	23.2
	May 09	May 08	Change, %	
Total US².....	2,367	1,836	28.9	

¹Working gas. ²At end of period. Source: Energy Information Administration. Data available in OGJ Online Research Center.

REFINED PRODUCT PRICES

	8-7-09 c/gal	8-7-09 c/gal
Spot market product prices		
Motor gasoline	Heating oil No. 2	
(Conventional-regular)	New York Harbor.....	188.54
New York Harbor.....	Gulf Coast.....	186.79
Gulf Coast.....	Gas oil	
Los Angeles.....	ARA.....	189.93
Amsterdam-Rotterdam-Antwerp (ARA).....	Singapore.....	192.50
Singapore.....	Residual fuel oil	
Motor gasoline	New York Harbor.....	154.83
(Reformulated-regular)	Gulf Coast.....	156.26
New York Harbor.....	Los Angeles.....	167.73
Gulf Coast.....	ARA.....	162.73
Los Angeles.....	Singapore.....	159.55

Source: DOE Weekly Petroleum Status Report. Data available in OGJ Online Research Center.

Statistics

WORLD OIL BALANCE

	2009 1st qtr.	2008				2007 4th qtr.
		4th qtr.	3rd qtr.	2nd qtr.	1st qtr.	
DEMAND						
OECD						
US & Territories.....	19.06	19.53	19.19	20.04	20.31	20.90
Canada.....	2.20	2.26	2.28	2.19	2.31	2.38
Mexico.....	2.05	2.07	2.14	2.19	2.12	2.16
Japan.....	4.72	4.71	4.34	4.63	5.45	5.25
South Korea.....	2.34	2.14	2.10	2.11	2.35	2.31
France.....	2.02	2.04	1.95	1.95	2.01	2.02
Italy.....	1.55	1.62	1.64	1.64	1.66	1.75
United Kingdom.....	1.73	1.73	1.65	1.73	1.73	1.73
Germany.....	2.57	2.65	2.71	2.43	2.49	2.54
Other OECD						
Europe.....	7.03	7.31	7.48	7.27	7.43	7.62
Australia & New Zealand.....	1.08	1.12	1.10	1.11	1.10	1.15
Total OECD.....	46.35	47.18	46.58	47.29	48.96	49.81
NON-OECD						
China.....	7.55	7.36	8.10	7.99	7.96	7.61
FSU.....	4.11	4.38	4.35	4.31	4.30	4.35
Non-OECD Europe.....	0.77	0.80	0.80	0.79	0.79	0.81
Other Asia.....	9.16	8.76	8.96	9.61	9.52	9.29
Other non-OECD.....	15.31	15.55	16.40	16.03	15.12	15.96
Total non-OECD.....	36.90	36.85	38.61	38.73	37.69	38.02
TOTAL DEMAND.....	83.25	84.03	85.19	86.02	86.65	87.83
SUPPLY						
OECD						
US.....	8.78	8.46	8.18	8.75	8.67	8.58
Canada.....	3.39	3.40	3.40	3.22	3.38	3.40
Mexico.....	3.06	3.12	3.15	3.19	3.29	3.33
North Sea.....	4.40	4.37	4.06	4.31	4.44	4.57
Other OECD.....	1.56	1.60	1.60	1.58	1.53	1.57
Total OECD.....	21.19	20.95	20.39	21.05	21.31	21.45
NON-OECD						
FSU.....	12.60	12.46	12.42	12.60	12.59	12.65
China.....	3.92	3.99	3.97	4.00	3.94	3.87
Other non-OECD.....	12.50	12.38	12.32	12.15	12.22	12.12
Total non-OECD, non-OPEC.....	29.02	28.83	28.71	28.75	28.75	28.64
OPEC*.....	33.24	35.16	36.18	35.84	35.72	36.15
TOTAL SUPPLY.....	83.45	84.94	85.28	85.64	85.78	86.24
Stock change.....	0.20	0.91	0.09	-0.38	-0.87	-1.59

*Includes Angola.
Source: DOE International Petroleum Monthly
Data available in OGJ Online Research Center.

US PETROLEUM IMPORTS FROM SOURCE COUNTRY

	Apr. 2009	Mar. 2009	Average YTD		Chg. vs. previous year	
			2009 1,000 b/d	2008	Volume	%
Algeria.....	612	463	545	528	17	3.2
Angola.....	462	657	582	478	104	21.8
Kuwait.....	105	181	194	223	-29	-13.0
Nigeria.....	733	891	661	1,154	-493	-42.7
Saudi Arabia.....	1,021	967	1,117	1,528	-411	-26.9
Venezuela.....	891	1,106	1,124	1,158	-34	-2.9
Other OPEC.....	930	950	935	1,046	-111	-10.6
Total OPEC.....	4,754	5,215	5,158	6,115	-957	-15.7
Canada.....	2,281	2,438	2,444	2,583	-139	-5.4
Mexico.....	1,289	1,199	1,320	1,344	-24	-1.8
Norway.....	112	192	118	100	18	18.0
United Kingdom.....	424	208	264	204	60	29.4
Virgin Islands.....	290	264	313	341	-28	-8.2
Other non-OPEC.....	2,823	2,958	2,846	2,357	489	20.7
Total non-OPEC.....	7,219	7,259	7,305	6,929	376	5.4
TOTAL IMPORTS.....	11,973	12,474	12,463	13,044	-581	-4.5

Source: DOE Monthly Energy Review
Data available in OGJ Online Research Center.

OECD TOTAL NET OIL IMPORTS

	Apr. 2009	Mar. 2009	Feb. 2009	Apr. 2008	Chg. vs. previous year	
					Volume	%
Canada.....	-1,387	-1,477	-1,390	-1,284	-103	8.0
US.....	10,073	10,636	10,369	11,498	-1,425	-12.4
Mexico.....	-1,065	-1,102	-1,254	-1,335	270	-20.2
France.....	1,641	2,025	1,806	1,716	-75	-4.4
Germany.....	2,273	2,440	2,325	2,222	51	2.3
Italy.....	1,481	1,441	1,261	1,528	-47	-3.1
Netherlands.....	1,060	820	1,233	818	242	29.6
Spain.....	1,376	1,463	1,668	1,627	-251	-15.4
Other importers.....	3,774	4,046	3,819	4,070	-296	-7.3
Norway.....	-2,098	-2,413	-2,437	-2,069	-29	1.4
United Kingdom.....	-16	125	-3	115	-131	-113.9
Total OECD Europe..	9,491	9,947	9,672	10,027	-536	-5.3
Japan.....	4,100	4,374	4,768	5,077	-977	-19.2
South Korea.....	1,965	2,162	2,519	2,055	-90	-4.4
Other OECD.....	917	955	786	1,055	-138	-13.1
Total OECD.....	24,094	25,495	25,470	27,093	-2,999	-11.1

Source: DOE International Petroleum Monthly
Data available in OGJ Online Research Center.

OECD* TOTAL GROSS IMPORTS FROM OPEC

	Apr. 2009	Mar. 2009	Feb. 2009	Apr. 2008	Chg. vs. previous year	
					Volume	%
Canada.....	459	369	392	500	-41	-8.2
US.....	4,754	5,215	4,956	6,259	-1,505	-24.0
Mexico.....	29	23	11	10	19	190.0
France.....	567	689	722	650	-83	-12.8
Germany.....	464	347	355	495	-31	-6.3
Italy.....	963	1,047	966	1,176	-213	-18.1
Netherlands.....	533	516	571	554	-21	-3.8
Spain.....	653	689	1,036	559	94	16.8
Other importers.....	1,036	1,139	908	1,224	-188	-15.4
United Kingdom.....	257	311	285	267	-10	-3.7
Total OECD Europe...	4,473	4,738	4,843	4,925	-452	-9.2
Japan.....	3,629	3,806	4,273	4,434	-805	-18.2
South Korea.....	2,072	2,274	2,572	2,193	-121	-5.5
Other OECD.....	482	535	376	661	-179	-27.1
Total OECD.....	15,898	16,960	17,423	18,982	-3,084	-16.2

*Organization for Economic Cooperation and Development.
Source: DOE International Petroleum Monthly
Data available in OGJ Online Research Center.

OIL STOCKS IN OECD COUNTRIES*

	Apr. 2009	Mar. 2009	Feb. 2009	Apr. 2008	Chg. vs. previous year	
					Volume	%
France.....	173	178	178	173	—	—
Germany.....	279	278	279	279	—	—
Italy.....	132	131	128	134	-2	-1.5
United Kingdom.....	98	100	98	98	—	—
Other OECD Europe.....	723	724	726	679	44	6.5
Total OECD Europe.....	1,405	1,411	1,409	1,363	42	3.1
Canada.....	196	198	196	195	1	0.5
US.....	1,812	1,795	1,770	1,666	146	8.8
Japan.....	606	611	619	610	-4	-0.7
South Korea.....	152	155	157	141	11	7.8
Other OECD.....	114	109	108	105	9	8.6
Total OECD.....	4,285	4,279	4,259	4,080	205	5.0

*End of period.
Source: DOE International Petroleum Monthly Report
Data available in OGJ Online Research Center.

Classified Advertising

Your marketplace for the oil and gas industry

DEADLINE for CLASSIFIED ADVERTISING is 10 A.M. Tuesday preceding date of publication. Address advertising inquiries to CLASSIFIED SALES, 1-800-331-4463 ext. 6301, 918-832-9301, fax 918-832-9201, email: glendah@pennwell.com.

- **DISPLAY CLASSIFIED:** \$390 per column inch, one issue. 10% discount three or more CONSECUTIVE issues. No extra charge for blind box in care. Subject to agency commission. No 2% cash discount.

- **UNDISPLAYED CLASSIFIED:** \$4.00 per word per issue. 10% discount for three or more CONSECUTIVE issues. \$80.00 minimum charge per insertion. Charge for blind box service is \$56.00. No agency commission, no 2% cash discount. Centered/Bold heading, \$9.00 extra.
- **COMPANY LOGO:** Available with undisplayed ad for \$83.00. Logo will be centered above copy with a maximum height of 3/8 inch.
- **NO SPECIAL POSITION AVAILABLE IN CLASSIFIED SECTION.**
- **PAYMENT MUST ACCOMPANY ORDER FOR CLASSIFIED AD.**

EMPLOYMENT



OILFIELD & GAS MARKET MANAGER

Growing PVF manufacturer and distributor in Kansas City, MO is looking for an experienced, self-motivated, and professional leader to successfully increase our share of the Oilfield & Gas market.

We're currently looking for the best sales professional in the Kansas City area to join our team and drive sales throughout the United States. This individual will be responsible for driving strategic sales initiatives.

Responsibilities include:

- Prospect and penetrate new accounts
- Manage multiple deals concurrently.
- Qualify and forecast deals accurately.
- Exceed goals and make money.

Requirements:

- Seasoned Sales Professional - 5+ years of successful sales experience.
- Consistent Success - Over-quota, top ranked, President's-Club-making performance throughout your sales career.
- Stability - A history of intelligent career decisions that resulted in wildly successful, non-brief tenures.
- Prospecting - A lack of fear towards prospecting. An ability, creativity and passion towards prospecting and breaking into new accounts.
- Likeability - No Jerks - this is one of our core company values.

Preferred Skills and Experience:

- New market sales experience - success evangelizing a new product in a new market.
- Successes in different companies - a proven ability to take your sales skills and be successful selling in different markets, different cultures, to different audiences.

Benefits include very competitive compensation package with a base salary, uncapped commission, dental and health insurance.

Please send your resume and compensation history to Jim Hodes, jim@midlandmetal.com

**OGJ Classifieds
Get Results**

ConocoPhillips Company in Bartlesville, Ok seeks Materials Scientist/Engineer. Qualified applicants will possess a Master's degree in materials science/engineering or metallurgy and a minimum of two years experience in the selection of specialized metallurgy depending on use conditions, corrosion/erosion control, mill and inspection processes, materials of construction, and oil and gas production processes. To submit resume, please visit www.conocophillips.com/careers. Put Job code 007BP on resume.

Smith International, Inc. in Houston, Texas seeks Reliability Engineer IV to participate in hardware and data analysis including fracture surface analysis, fatigue life determination of alloy steels, failure analysis of tungsten carbide and diamond enhanced inserts, failure analysis of rotary seals; prepare reports for product improvement and failure definition, including customer reports. Must have Bachelor's degree in Chemical, Mechanical or Materials Engineering and 7 yrs of experience. Mail resume to S. Gillen, HR, Smith International, 1310 Rankin Rd., Houston, Tx 77073. Must indicate job code REIV on resume.

RESERVOIR ENGINEER

Chevron seeks Reservoir Eng in Covington, LA. BS in Petro Eng + 5 yr exp in job offered or as Researcher/petro eng OR Master's + 3 yr exp. Req'd skills: performance analysis of oil & gas reservoirs w/adv reservoir eng & numerical model/simulation studies; adv petro eng - hydrocarbon fluid behavior, fluid modeling, material balance, special core analysis; numeric modeling, reservoir characterization, performance prediction for devel & depletion/surveillance planning; well testing; test planning, pressure transient analysis, adv decline curve analysis methods & interference testing, reserves mgmt, recovery techniques, volume calculations, basic formation eval & econ analysis. Mail resume: 1500 Louisiana St, Houston, TX 77002 attn Y. Vasquez, Ref job 124.

EQUIPMENT FOR SALE



Producing Solutions

Water, Oil and Gas
Treatment/Conditioning
Equipment

For Sale, Lease, Contract Service

Separators, Hydrocyclones, Float Cells, Filtration, Electrostatic Oil Treaters, Amine Units, Glycol Units, JT-Plants, Refrigeration Units, LACT Units

For Information Call 713.849.7520

www.NATCOGroup.com

EQUIPMENT FOR SALE

FOR SALE / RENT

5.2 MW MOBILE GEN SETS
CALL: 800-704-2002



SOLAR
TAURUS 60

- GAS - LOW NOx (OIL)
- 60 Hz - 13.8KV or 50 Hz - 11KV
- LOW HOUR - SOLAR SERVICED

DIESELS • TURBINES • BOILERS

24/7 EMERGENCY SERVICE
IMMEDIATE DELIVERY

www.wabashpower.com | info@wabashpower.com
Phone: 847-541-5600 Fax: 847-541-1279

wabash POWER
EQUIPMENT CO.

444 Carpenter Avenue, Wheeling, IL 60090

SURPLUS GAS PROCESSING/REFINING
EQUIPMENT

NGL/LPG PLANTS: 10 - 600 MMCFD
AMINE PLANTS: 60 - 5000 GPM
SULFUR PLANTS: 10 - 1200 TPD
FRACTIONATION: 1000 - 15,000 BPD
HELIUM RECOVERY: 75 & 80 MMCFD
NITROGEN REJECTION: 25 - 80 MMCFD
ALSO OTHER REFINING UNITS

We offer engineered surplus equipment solutions.

Bexar Energy Holdings, Inc.

Phone 210 342-7106

Fax 210 223-0018

www.bexarenergy.com

Email: info@bexarenergy.com

BUSINESS OPPORTUNITY

Want to purchase minerals and other oil/gas interests. Send details to: P.O. Box 13557, Denver, CO 80201.

WANTED

Broker Dealer
To Sell Registered
Oil Gas Program
615-479-4156

Classified Advertising

HYDROCARBON-OIL-GAS

Mineral Interest for sale or lease: Acreage shallow/Marcellus shale and deeper formations with excellent subsurface geology in Tioga Potter County, PA. Fax 570-538-1818

CONSULTANT

Brazil: EXPETRO can be your guide into this new investment frontier.

Effective strategic analysis, quality technical services, compelling economic/regulatory advice, and realistic approach regarding Brazilian business environment-120 specialists upstream, downstream gas and biofuels.

Email: contato@expetro.com.br

Web: www.expetro.com.br-Rio de Janeiro, Brazil

STRUCTURES

ClearSpan™
A DIVISION OF TEK SUPPLY

When you need a quality building fast, ClearSpan™ is the only choice.



Buildings available up to 250' wide. Natural daytime lighting.

Easy to relocate. Expandable. Low in cost per square foot.

Call today...

...for your free catalog 1.800.835.7877 or shop online at www.TekSupply.com. Please mention code CST0943.

**Hiring?
Selling Equipment?
Need Equipment?
Business Opportunity?**

Contact: Glenda Harp
+1-918-832-9301 or
1-800-331-4463, ext. 6301
Fax: +1-918-831-9776

**Unconventional Gas:
New Methods. New Supply.**

Register Today
www.unconventionalgas.net

 **UNCONVENTIONAL GAS
INTERNATIONAL
CONFERENCE & EXHIBITION™**

September 29 - October 1, 2009
Fort Worth Convention Center
Fort Worth, Texas USA

Owned & Produced By:   
 Flagship Media Sponsors:  **Offshore**
 Gold Sponsor: 
 Sponsored by: 

Advertising Sales / Advertisers Index

Houston

Director of Sales, Tripp Wiggins; Tel: (713) 963-6244, Email: trippw@pennwell.com. U.S. Sales Manager, Marlene Breedlove; Tel: (713) 963-6293, E-mail: marleneb@pennwell.com. Regional Sales Manager, Mike Moss; Tel: (713) 963-6221, E-mail: mikem@pennwell.com. PennWell - Houston, 1455 West Loop South, Suite 400, Houston, TX 77027. Fax: (713) 963-6228

South/Southwest /Texas/Northwest/Midwest/Alaska

Marlene Breedlove, 1455 West Loop South, Suite 400, Houston, TX 77027; Tel: (713) 963-6293, Fax: (713) 963-6228; E-mail: marleneb@pennwell.com

Northeast/Texas/Southwest

Mike Moss, 1455 West Loop South, Suite 400, Houston, TX 77027; Tel: (713) 963-6221, Fax: (713) 963-6228; E-mail: mikem@pennwell.com

Louisiana/Canada

Tripp Wiggins, 1455 West Loop S. Ste. 400, Houston, TX 77027; Tel: (713) 963-6244, Fax: (713) 963-6228; E-mail: trippw@pennwell.com

Scandinavia/Denmark/The Netherlands/Middle

East/Africa

David Betham-Rogers, 11 Avenue du Marechal Leclerc, 61320 Carrouges, France; Tel: 33.2.33.282584, Fax: 33.2.33.274491; E-mail: davidbr@pennwell.com

United Kingdom

Stephen Wilding, 188 Gordon Avenue, Camberley, GU15 2NT United Kingdom Tel: +44.7545.829.891, Fax: +44 7545.829.891; E-mail: stephenw@pennwell.com

France/Belgium/Spain/Portugal/Southern

Switzerland/Monaco

Daniel Bernard, 8 allée des Herons, 78400 Chatou, France; Tel: 33(0)1.3071.1224, Fax: 33(0)1.3071.1119; E-mail: danielb@pennwell.com

Germany/Austria/Northern/Switzerland/Eastern

Europe/Russia/Former Soviet Union

Sicking Industrial Marketing, Kurt-Schumacher-Str. 16, 59872, Freienohl, Germany. Tel: 49(0)2903.3385.70, Fax: 49(0)2903.3385.82; E-mail: wilhelms@pennwell.com; www.sicking.de <<http://www.sicking.de>> Andreas Sicking

Japan

ICS Convention Design Inc., Plama Bldg. 2F, 2-13-8, Nihonbashi Kayabacho, Chuo-ku, Tokyo 103-0025, Japan, Tel: 81.3.5645.1271, Fax: 81.3.5645.1272; Manami Konishi, E-mail: manami.konishi@ex-press.jp; Masaki Mori, E-mail: masaki.mori@ex-press.jp

Brazil

Grupo Expetro/Smartpetro, Att: Jean-Paul Prates and Bernardo Grunewald, Directors, Ave. Erasmo Braga 22710th and 11th floors Rio de Janeiro RJ 20024-900 Brazil; Tel: 55.21.3084.5384, Fax: 55.21.2533.4593; E-mail: jpprates@pennwell.com.br and bernardo@pennwell.com.br

Singapore/Australia/Asia-Pacific

Michael Yee, 19 Tanglin Road #09-07, Tanglin Shopping Center, Singapore 247909, Republic of Singapore; Tel: 65 6737.2356, Fax: 65.6734.0655; E-mail: yfye@singnet.com.sg

India

Rajan Sharma, Interads Limited, 2, Padmini Enclave, Hauz Khas, New Delhi-110 016, India; Tel: +91.11.6283018/19, Fax: +91.11.6228 928; E-mail: rajan@interadsindia.com

Italy

Paolo Silvera, Viale Monza, 24 20127 MILANO Italy; Tel: +02.28.46 716; E-mail: info@silvera.it

A

Atlantic Council of the United States 17
www.acus.org

B

Baker Hughes, Incorporated.....Back Cover
www.bakerhughes.com
BCKK Engineering, Inc.
..... Inside Front Cover
www.bckk.com

C

Ceradyne, Inc. 13
www.ceradyne.com
Chesapeake Energy 2
www.chk.com

F

Fluor 4
www.fluor.com/offshore

I

Industrial Rubber, Inc. 12
www.iri-oiltool.com

L

Lagcoe 19
www.lagcoe.com

P

PennWell Corporation
Deepwater Operations 40
www.deepwateroperations.com
DOT International 57
www.dotinternational.net
DOT Monaco 31
www.deepoffshoretechnology.com
Offshore Middle East 2009 43
www.offshoremiddleeast.com
OGMT North America 35-35
www.ogmtna.com
Oil Sands and Heavy Oil Technologies ...
..... Inside Back Cover
www.oilsandstechnologies.com
Unconventional Gas International 62
www.unconventionalgas.net

S

SPE - ATCE 2009 55
www.spe.org/atce
StatoilHydro 7

T

TMEIC GE 14
www.tmge.com

V

Veolia Environnement 9
www.veolianorthamerica.com

W

World Energy Congress 2010 51
www.wecmontreal2010.ca
World Gas Conference 56
www.wgc2009.com

This index is provided as a service. The publisher does not assume any liability for errors or omission.

From the Subscribers Only area of

Hazards linger as the Obama agenda stalls

Those raucous outbursts against health-care reform legislation mean more than what US President Barack Obama and his Democratic Party stalwarts want to believe.

Americans correctly sense that their stylish and articulate president has been railroading them—and not just on health care.

Attempts to discredit the backlash as misapprehension wrought by right-wing

The Editor's Perspective

by Bob Tippee, Editor

scaremongering look foolish.

In fact, the Congressional Budget Office wrecked the Obama program when it estimated that health bills written to the president's prescription would add at least \$1 trillion to the federal deficit over 10 years.

CBO thus punctured Obama's core argument: that health-care costs will lead to fiscal ruin if the government doesn't take control of the system and promise insurance coverage to everyone.

Rising US health costs remain a problem, of course. But Obama's lots-for-all solution is collapsing under the weight of its own impossible economics.

Democrats now can hope only to pass some light version of health-care reform and declare victory. But the damage is done, and Obama's credibility has suffered.

The president similarly jumped overboard with energy and climate change provisions of his budget proposal.

Obama wanted to raise tens of billions of dollars from the oil and gas industry, with tax changes, and hundreds of billions from emitters of greenhouse gases, with auctions of emission credits. He aimed proceeds at renewable energy and relief for families hurt by recession.

In Congress, however, tax changes that would have stymied US drilling have stalled. And the emission-credit auction has given way to a politically malleable allocation system providing few of the front-end dollars crucial to Obama's wealth transfers.

These are fundamental defeats for a president who tried to change too much of the national economy too radically and too quickly. American wariness of heedless liberalism is evident in recent slides in Obama's approval ratings.

Yet the oil and gas industry can take no comfort in the unraveling of his hostile political agenda. Hazards persist.

Democrats will feel obliged to rescue their fading hero. They need a dragon to slay. They need tax revenue. For the industry, these are reasons to worry.

(Online Aug. 14, 2009; author's e-mail: bobt@ogjonline.com)

Market Journal

by Sam Fletcher, Senior Writer

A century of speculation

For more than 100 years, US legislators have passed laws to reduce price volatility and prevent manipulation of commodity markets. So why should today's "new wave of regulation" prove any better than those in the past? asks Adam Sieminski, chief energy economist, Deutsche Bank, Washington, DC.

The US Commodity Futures Trading Commission proposes to extend to energy futures the regulation and supervision that already exists for agricultural markets. "But if legislation has not been able to curb excessive price moves in agricultural prices, why should its extension to energy markets be any different?" Sieminski asked in a recent report.

"In the past, measures to control commodity prices have ranged from raising margin requirements, increasing position limits, introducing trader reporting requirements, naming and shaming market positions of large traders, introducing price controls, banning exports, prohibiting trading in a particular commodity futures contract or, in the extreme, an outright ban of trading a particular commodity future," Sieminski reported. "With politicians and regulators appearing to downplay the significant mismatch between commodity supply and demand as the primary factor driving many commodity prices, we are once again embarking on another confrontation between regulators and speculators," he said.

In the late 19th Century, the government introduced the first of many bills to regulate, ban, or tax commodity trading in the US. But legislation to curb perceived excesses of speculation began to accelerate in the early 20th Century.

In 1921, legislation was introduced to confine trade of grain futures to regulated exchanges that allowed federal scrutiny. During the Great Depression, the Commodity Exchange Act was introduced to combat excessive declines in grain and cotton prices, which were blamed on speculators. In 1947 as commodity prices rose during the postwar boom, there was legislation permitting the US Secretary of Agriculture to publish the names, addresses, and market positions of 35,000 traders. In 1973, the US government introduced price controls, banned export of soybeans, and increased futures margin requirements in an attempt "to reverse a trebling in many commodity prices," Sieminski said.

The Hunt brothers' case

And then there was the case of oilmen Nelson Bunker and William Herbert Hunt, sons of legendary H.L. Hunt, who were accused of attempting to corner the silver market. The elder brother, Bunker Hunt, an extreme conservative, saw silver as a stable commodity in a financially unstable world—a hedge against inflation. So in the 1970s, he and brother Herbert began buying silver.

According to one version of this story, the Hunts accumulated 10% of the known world supply of silver by the mid-1970s. Another source estimated the brothers at one time held a third of the world's privately owned silver. In the process, they drove up the price. After investing most of their own capital, the Hunts teamed with wealthy Arabs to buy more silver, which in turn increased the value of their own holdings. Others got in the game. In less than 10 years, the price of silver climbed from \$2/oz to a record \$50/oz. And Bunker expected it to go higher.

In time, a worried Chicago Board of Trade and COMEX, a division of the New York Mercantile Exchange originally known as Commodity Exchange Inc., changed their rules, heavily restricting purchases of commodities on the margin and limiting the size of silver contracts held by any one trader. All excess contracts were to be liquidated by February. According to sources, the Hunts' silver position was worth \$4.5 billion when the price peaked in January.

The Hunts had borrowed heavily to buy silver and were unable to satisfy financial obligations as the price began to fall. Facing a potential loss of \$1.7 billion, the Hunts couldn't meet a margin call for \$100 million. On Mar. 27, 1980—"Silver Thursday"—a steep drop in silver prices sparked a panic that rocked financial markets beyond silver commodities and forced the sale of Hunt positions.

Fearing collapse of large Wall Street firms, a consortium of US banks provided a \$1.1 billion line of credit to the brothers so they could repay—and thus save—the brokerage firm Bache Halsey Stuart Shields, now Prudential-Bache Securities LLC.

The Hunts pledged most of their assets, including their stake in Placid Oil, as collateral for the rescue loan, but the value of their holdings in oil, sugar, and real estate fell steadily in the 1980s, leading to bankruptcy filings by the brothers and Placid Oil and eventual sale of the company. In a 1989 settlement, Bunker Hunt agreed to pay \$10 million, the largest fine then ever levied by the CFTC.

(Online Aug. 17, 2009; author's e-mail: samf@ogjonline.com)



www.OilSandsTechnologies.com

Call for Abstracts

Expanding Sustainably

Growth requires the oil sands and heavy oil industry to make steady, long-term progress along a narrow road for which no map exists.

On one side loom the high costs of extracting, processing, and transporting unconventional hydrocarbons.

On the other side are environmental performance standards that toughen with time and that the industry never must fail to meet.

Each step along this road requires innovation. Each must withstand unpredictable economic changes. Each must uphold eternal values of nature and society.

On this road, the beacon for progress is technology, advances in which will control the costs, improve

the environmental performance, and assure the sustainability of an industry crucial to oil supplies – now and in the future.

The Oil Sands and Heavy Oil Technologies Conference & Exhibition is the premier showcase for the knowledge and methods of this fascinating business.

Conference organizers are accepting 150–400-word abstracts for the 2010 event at www.oilsandstechologies.com

Abstracts should summarize a noncommercial, technical presentation offering practical solutions to the operating and environmental challenges facing oil sands operators, upgraders, and electricity providers.

Guidelines are available at www.OilSandsTechnologies.com.

Please submit a 150-400 word abstract by October 16, 2009.

For author guidelines and to submit your abstract online go to OilSandsTechnologies.com

For more information, contact:

Gail Killough

Conference Manager

Phone: +1 713 963 6251

Fax: +1 713 963 6201

gailk@pennwell.com

Abstracts are due by October 16, 2009.

Oil Sands and Heavy Oil Technologies Conference & Exhibition | July 20–22, 2010 | Calgary TELUS Convention | Centre, Calgary, Canada

Owned & Produced by:



Flagship Media Sponsors:



Media Partners:





Coring Performance for the Ages.

622 feet of perfect core in a single run.

The cost savings alone are monumental.

- Objective:** Unprecedented, ultra-long coring runs to recover the highest quality, best preserved cores at higher ROP without tripping; delivering significant time and cost savings.
- Environment:** Khuff gas formation, Qatar, 9,200 ft (2,804 m).
- Technology:** INTEQ HT Series™ ultra-long core barrels and QuickCore™ core bits. Reliable aluminum inner barrels. Non-rotating inner tube stabilizers.
- Answers:** Reduced full coring program of 1,500 ft (457 m) of Khuff formation from 20 days to nine. World-record single core run of 622 ft (190 m) at an average ROP of 15 ft/hr (5 m/hr).

Get rock-solid coring answers all at once at www.bakerhughes.com/coring.