

PREVIEWS

Impacts of fluid flow	<i>Diagenetic processes in deeply buried sandstones in Bohai Bay Basin, China, are related to pore-fluid flow changes with progressive burial. This study was done in order to understand the sources and the patterns of fluid flow and to develop a predictive model for the distribution of authigenic minerals.</i>	<i>1633</i>
Submarine channel levee systems	<i>This paper presents a combined outcrop and subsurface study of a channel-levee complex set, the sedimentary facies distribution, and the depositional architecture of six constituent channel complexes from the Permian Fort Brown Formation, Karoo Basin, South Africa.</i>	<i>1663</i>
How pores evolve in mudrocks	<i>The evolution of pore types and pore networks in mudrocks as well as pore shape and size distribution at increasing levels of thermal maturity are investigated. The relationship between thermal maturity and pore evolution provides a basis for understanding the impacts on mudrock-reservoir quality.</i>	<i>1693</i>
Understanding megaflaps	<i>Megaflaps, or steep stratal panels that extend up the sides of diapirs, typically represent the relatively thin roofs of early salt structures that include single-flap active diapirs, passive diapirs, salt pillows, and salt sheets. Understanding them is critical to petroleum exploration.</i>	<i>1723</i>
Organic and petrographic studies	<i>Organic matter types, paleoenvironmental conditions, and petroleum generation potential were determined from Paleogene and Neogene source rocks from the Sayhut subbasin in the Gulf of Aden Basin. They were deposited in a marine environment under suboxic to anoxic conditions.</i>	<i>1749</i>

AAPG BULLETIN STAFF

Editorial

Technical Publications Assistant Team Lead/Paula Sillman
Technical Editor/Andrea Sharrer
Phone: (918) 584-2555
(800) 364-2274 (U.S. and Canada)
Fax: (918) 560-2632
E-mail: bulletin@aapg.org

Production

Cover/Matt Randolph
Production/Sheridan Journal Services
Waterbury, Vermont
Printing/Sheridan - Sheridan PA
Hanover, Pennsylvania

Subscriptions

Members	Nonmembers
Membership Dept.	Accounting Dept.
Phone: (918) 584-2555	(918) 584-2555
Fax: (918) 560-2694	(918) 560-2652
Toll Free: (800) 364-2274	bulletinsubscriptions@aapg.org (U.S. and Canada)

AAPG grants permission for a single photocopy of an item from the AAPG Bulletin for personal use. Authorization for additional photocopies of items from the AAPG Bulletin in any form (hardcopy, digital/electronic scanning, or other digital transformation into computer-readable and/or transmittable form) for personal or corporate use is granted provided the appropriate fee is paid directly to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, Massachusetts 01923, <http://www.copyright.com>. For circumstances occurring outside authorization of Copyright Clearance Center contact permissions@aacg.org.

The AAPG Bulletin (ISSN 0149-1423) is published monthly by the American Association of Petroleum Geologists. Offices are located at 1444 South Boulder Avenue, Tulsa, Oklahoma 74119-3604. Periodicals postage paid at Tulsa, Oklahoma, and at additional mailing offices.

POSTMASTER: send change of address to AAPG Bulletin, P.O. Box 979, Tulsa, Oklahoma 74101-0979.

SUBSCRIPTIONS

Institutional subscriptions are \$490 U.S. by surface mail; \$630 non-U.S. by Airmail. AAPG member subscriptions are included in the dues. Single copies: \$35 member, \$45 nonmember. Prices subject to change without notice. Claims for nonreceipt of any issue, if reported within three months of the date of publication, will be filled gratis. Back issues, if available, may be ordered from the Association.

Copyright © 2016 by the American Association of Petroleum Geologists. All rights reserved. Phone (918) 584-2555, fax (918) 560-2632, e-mail: bulletin@aapg.org

CANADA SUBSCRIPTIONS

Canada Post Agreement Number 40036158. Send change of address information and blocks of undeliverable copies to P.O. Box 1051, Fort Erie, ON, L2A 6C7, Canada.

The American Association of Petroleum Geologists (AAPG) does not endorse or recommend any products or services that may be cited, used or discussed in AAPG publications or in presentations at events associated with AAPG.



AAPG Editor
BARRY JAY KATZ
Chevron Energy Technology Company
Houston, Texas

SENIOR ASSOCIATE EDITORS

Claudio Bartolini, Repsol, The Woodlands, Texas
Kent Bowker, Bowker Petroleum, The Woodlands, Texas
Richard Groshong, University of Alabama, Tuscaloosa, Alabama
Colin P. North, University of Aberdeen, Aberdeen, Scotland
Stephen Ruppel, Bureau of Economic Geology, The University of Texas at Austin, Austin, TX

ASSOCIATE EDITORS

E&P Notes

F. E. (Rick) Abegg (2015), Moon Township, PA, Eastern Section
Arthur E. Berman (2015), Sugar Land, Texas, Gulf Coast Section
Stuart D. Harker (2015), Aberdeen, Scotland, European Region
Marcio R. Mello (2015), Rio de Janeiro, Brazil, Latin America Region
David G. Morse (2015), Champaign, Illinois, Eastern Section

Spatial

Bret J. Fossum, ConocoPhillips, Houston, TX

2015-2016

Mohammed S. Ameen, Saudi Aramco, Dhahran, Saudi Arabia
Donna S. Anderson, EOG Resources Inc., Golden, CO
Marc Aurell, Universidad de Zaragoza, Zaragoza, Spain
David N. Awwiller, ExxonMobil, Houston, TX
Linda M. Bonnell, Geocosm, LLC, Austin, TX
Caroline M. Burberry, Department of Earth & Atmospheric Science, University of Nebraska-Lincoln, Lincoln, NE
Stephen P. Cumella, Consulting Geologist, Denver, CO
William D. DeMis, Southwestern Energy, Houston, TX
David E. Eby, EBY Petrography & Consulting, Inc., Denver, CO
Peter Eichhubl, Bureau of Economic Geology, The University of Texas at Austin, Austin, TX
Ursula Hammes, Bureau of Economic Geology, The University of Texas at Austin, Austin, TX
Peter Hennings, ConocoPhillips, Houston, TX
William A. Hill, BP, Houston, TX
Alexander A. Kitchka, Centre for Aerospace Research of the Earth at Institute of Geological Sciences (CASRE), Kiev, Ukraine
Alfred Lacazette, Global Geophysical Services, Denver, CO
Andres Mora, Instituto Colombiano del Petróleo-ICP, Colombia
Joyce E. Neilson, University of Aberdeen, Aberdeen, Scotland
Kenneth E. Peters, Schlumberger and Stanford University, Mill Valley, CA
Dave A. Pivnik, Occidental Oil & Gas, Houston, TX
Matthew J. Pranter, University of Oklahoma, Norman, OK
Atle Rotevatn, University of Bergen, Bergen, Norway
Sandro Serra, Serra GeoConsulting LLC, Bellaire, TX
Carl K. Steffensen, BP America Inc., Houston, TX
Peter D. Warwick, U.S. Geological Survey, Reston, VA
Horst Zwingmann, Kyoto University, Kyoto, Japan

2016-2017

Patricia F. Allwardt, ConocoPhillips, Houston, TX
Janok P. Bhattacharya, McMaster University, Hamilton, ON, Canada
Brigitte Doligez, Institut Français du Pétrole, Cedex, France
Julia F. W. Gale, University of Texas at Austin, Austin, TX
Chenglin Gong, University of Texas at Austin, Austin, TX
Fang Hao, China University of Petroleum, Beijing, China
Nicholas B. Harris, University of Alberta, Edmonton, AB, Canada
Qinhong Hu, University of Texas at Arlington, Arlington, TX
Dale A. Leckie, Nexen Inc., Calgary, AB, Canada
Terrylyn Olson, FEI, Denver, CO
Bradford E. Prather, Shell Upstream Americas, Houston, TX

The American Association of Petroleum Geologists

EXECUTIVE COMMITTEE 2016–2017

President: PAUL W. BRITT
Sections Vice President: DANIEL E. SCHWARTZ
Regions Vice President: PETER M. LLOYD
President-Elect: CHARLES STERNBACH
Secretary: HEATHER L. LAREAU
Treasurer: MARTIN HEWITT
Editor: BARRY KATZ
Chair, House of Delegates: JIM MCGHAY

ADVISORY COUNCIL, 2016–2017

Ex-Officio

JOHN R. HOGG, Chair
RANDI MARTINSEN
LEE KRYSZNIK
ANNE C. DRAUCKER
TIMOTHY M. MURIN
CHANDLER T. WILHELM
ROBERT C. SHOUP

Elected

CRAIG ECKERT, Eastern Section
WILLIAM M. WHITING, Gulf Coast Section
JOHN JORDAN, JR., Gulf Coast Section
MICHAEL F. MCGOWAN, Mid-Continent Section
STEPHEN A. "TONY" REID, Pacific Section
JOHN C. LORENZ, Rocky Mountain Section
ROBERT E. WEBSTER, Southwest Section
NOSA OMORODION, Africa Region
PETER GRANT, Asia/Pacific Region
CLINTON R. TIPPETT, Canada Region
ANDREA MOSCARIELLO, Europe Region
MIGUEL RAMIREZ, Latin America Region
TBA, Middle East

AAPG BOARDS

JAMES PAINTER, Corporate Advisory Board
BRET J. FOSSUM, Datapages Board
PETER MACKENZIE, GEO-DC Governance Board
JEFFREY W. LUND, IP LLC Board

AAPG COMMITTEE CHAIRS

STEVE SONNENBERG, 100th Anniversary (Ad Hoc)
(Co-Chair)
PAUL WEIMER, 100th Anniversary (Ad Hoc)
(Co-Chair)
BOB COUNTRYMAN, Association Group Insurance
TBD, Astrogeology (Co-Chair)
TBD, Astrogeology (Co-Chair)
JIM TUCKER, Audit
JIM TUCKER, Budget Review & Finance
CRAIG SHIPP, Distinguished Lecture (Co-Chair)
MATT JACKSON, Distinguished Lecture (Co-Chair)
TBD, Education
TBD, Education Awards
KAY PITTS, Ethics
DAVID STORY, Field Safety
HUYEN BUI, Geophysical Integration
R. RANDY RAY, GeV0
JIM MCDONALD, GIS Publication
ROGERS HARDY, History of Petroleum Geology

KRISTEN WOODEN, Imperial Barrel (Chair)
JOHN BROCK, Investments
JESSIE HOLLAND, Membership Career Services
TBD, Membership Coordination & Communication
STEVE GOOLSBY, Membership Recruitment
(Co-Chair)
BILL STEPHENS, Membership Recruitment
(Co-Chair)
MEREDITH FABER, Membership Young Professional
(Chair)
JON ALLEN, Membership Young Professional
(Co-Chair)
STEVE ALLEN, Preservation of Geoscience Data
(Co-Chair)
SARAH RAMDEEN, Preservation of Geoscience Data
(Co-Chair)
BARBARA TILLOTSON, Professional Women in Earth
Sciences (Chair)
ART BROWNING, Publications Pipeline
TBD, Public Outreach
DAVID BLANCHARD, Regions (Co-Chair)
VICTOR VEGA, Regions (Co-Chair)
JEAN-YVES CHATELLIER, Research (Co-Chair)
JOHN SUTER, Research (Co-Chair)
SOCHI IWUOHA, Reservoir Development
RUSTY RIESE, Resource Evaluation
MARY BROUSSARD, Sections
BRYANT FULK, Student Chapters
TBD, Student Expo
ROBBIE GRIES, Visiting Geoscientists Program,
(Co-Chair)
ANDRAS NEMETH, Visiting Geoscientists Program,
(Co-Chair)
KATHERINE HERLEMAN, Youth Educational Activities

AAPG SECTION OFFICERS

Eastern Section

JOHN HICKMAN, President
PATRICK GOODING, Vice President
ANDREW WAGGENER, Secretary
SCOTT GORHAM, Treasurer
CRAIG ECKERT, Past President

Gulf Coast Section (GCAGS)

THOMAS EWING, President
RALPH RICHARDSON, Vice President
GENE AMES, III, 2016 GCAGS Convention
General Chairman
DANIEL SUTTON, Treasurer
BRENT HOPKINS, Past President

Mid-Continent Section

H. W. PEACE, II, President
DOUG DAVIS, JR., Vice President
TERRY HOLLRAH, Secretary
MICHAEL ALLISON, Treasurer
DONALD G. BURDICK, Past President

Pacific Section

ROBERT A. HORTON, JR., President
EMILY FISHER, Vice President
MIKE NELSON, President-Elect
BECCA SCHEMPP, Secretary

LISA ALPERT, Treasurer
SIMMIE CHEHAL, Treasurer-Elect
VAUGHN THOMPSON, Editor-in-Chief
KURT NEHER, Past President

Rocky Mountain Section Officers:

ANDREW M. HENNES, President
JULIA LEMASTER, President-Elect
LYNETTE GEORGE, Secretary-Treasurer
TBD, Secretary-Treasurer-Elect
CATHERINE E. CAMPBELL, Past President

SOUTHWEST SECTION OFFICERS:

MICHAEL A. RAINES, President
NICOLAS O. BRISSETTE, President-Elect
AMY E. PATTERSON, Vice President
ROY L. YATES, Secretary
KELLI SNIDOW, Treasurer
DARRELL MAULDIN, Past President

AAPG REGION OFFICERS

Africa Region

WILLIAM BOSWORTH, President
SCOTT DUROCHER, Vice President
ADEGBENDGA "FEMI" ESAM, President-Elect
MIMONITU OPUWARI, Secretary
AJIBOLA OYEBAMIJI, Treasurer
DAVID BLANCHARD, Past President

Asia Pacific Region

PETER GRANT, President
CHRIS OGLESBY, Vice President
REETU RAGINI, Secretary
MICHAEL "MICK" MCWALTER, Treasurer
PETER BAILLE, Past President

Canada Region

FRANCOIS C. MARECHAL, President
MAREN BLAIR, Vice President/Treasurer
MERIEM GRIFI, Secretary/Foreman

Europe Region

JONATHAN CRAIG, President
FIONA MACAULAY, President-Elect
JONATHAN REDFERN, Secretary
EDWIGE ZANELLA, Treasurer
KEITH GERDES, Past President

Latin America Region

VICTOR VEGA, President
SYLVIA COUTO AJOS, Vice President
PEDRO A. ALARCON MEDINA, President-Elect
XAVIER MOONAN, Treasurer
VICTOR RAMIREZ, Past President

Middle East Region

ROBERT KUCHINSKI, President
TBD, Vice President
SALIM AL-MAHROUQI, President-Elect
SUBRATA CHAKRABORTY, Secretary
TBD, Treasurer
SA'ID A. AL HAIRI, Past President

The American Association of Petroleum Geologists

ENERGY MINERALS DIVISION

ANNE C. DRAUCKER, President
DOUGLAS E. WYATT, President-Elect
WAYNE K. CAMP, Vice President
BECKY L. KOWALSKI, Secretary
STEVEN SCHAMEL, Treasurer
ROBERT A. TREVAIL, Past President

Councillors

Eastern Section, JOE MORRIS
Gulf Coast Section, TBD
Mid-Continent Section, PENG LI
Pacific Section, TBD
Rocky Mountain Section, TBD
Southwest Section, TBD

International Councillors

Africa, TBD
Asia/Pacific, BARRY A. GOLDSTEIN
Canada, JOHN "JOCK" MCCRACKEN
Europe, TBD
Latin America, JOSE ABELARDO SANCHEZ ARAIZA

Chairs, Committees

WILLIAM AMBROSE, Coal
BRIAN CARDOTT, Coalbed Methane
JEREMY B. PLATT, Energy Economics & Technology
ART JOHNSON, Gas Hydrates
URSULA HAMMES, Shale Gas & Liquids
DEAN ROKASH, Gas (Tight) Sands
PAUL MORGAN, Geothermal
JACK PASHIN, Honors & Awards
FRAN HEIN, Nominations
SHARLEEN OVERLAND, Oil Sands
ALAN BURNHAM, Oil Shale
JACK PASHIN, Publications
FRAN HEIN, Deputy Editor, NRR
MICHAEL D. CAMPBELL, Uranium (Nuclear Minerals)
BRIAN CARDOTT, Website

DIVISION OF ENVIRONMENTAL GEOSCIENCES

TIM MURIN, President
STEPHEN TESTA, President-Elect
KRISTIN CARTER, Vice President
SEAN KIMIAGAR, Secretary/Treasurer
MICHELE L. COONEY, Editor
JEFFREY B. ALDRICH, Past President

Advisory Board Members

Chair, BRUCE SMITH
Eastern Section, TIM BASILONE
Gulf Coast Section, TIMOTHY W. DUEX
Mid-Continent Section, TBA
Rocky Mountain Section, DAN W. JACKSON
Southwest Section, CHRIS LEIBLI
Pacific Section, ALLEN WAGGONER
Asia-Pacific Region, K. B. TRIVEDI
Canada Region, FRANCOIS C. MARECHAL
European Regions Coordinator, DIRK NIEUWLAND
Middle East Region, ABDULRAHMAN S. AL-SHARHAN
Latin America, MELISA GALVAN
At-Large Members, MARK D. LOVELL

Chairs, Standing Committees

E. CHARLOTTE SULLIVAN, CO₂ Sequestration
LAURIE A. WHITESSELL, Environmental Geophysics
BRUCE D. SMITH, Honors and Awards
GENE L. MURRAY, Hydrogeology
BRUCE D. SMITH, Membership
JEFF PAINE, Nominating
MICHELE L. COONEY, Publications
TIM MURIN, Web Site
JOHN HUGHES, ICE 2015, Melbourne, Australia

DIVISION OF PROFESSIONAL AFFAIRS

CHANDLER WILHELM, President
JAMES H. HILL, SR., President-Elect
WILLIAM "BILL" HASKETT, Vice President
DEBRA P. OSBORNE, Secretary
STEVEN M. GOOLSBY, Treasurer
MICHAEL CANICH, Past President

Council Members

Eastern Section, JAY G. HENTHORNE,
JEFFREY R. BRUCE
Gulf Coast Section, LARRY L. JONES,
MARY L. VAN DER LOOP, JAMES M. GRUBB,
RALPH W. BAIRD, DIANNA PHU (RICK L.
ERICKSEN)
Mid-Continent Section, JUSTIN BELLAMY,
DON G. BURDICK (MICHAEL D. ALLISON)
Pacific Section, JESSICA MOORE (SARAH D. SALTZER,
DOUGLAS A. DRAVES, NORMAN C. ROSEN)
Rocky Mountain Section
DAVID WAVREK, MARGARET "PEGGY" WILLIAMS
(JEFFREY "JEFF" W. BRAME)
Southwest Section, MARGO J. LISS, STEVEN ZODY
Africa Region, BAYO AKINPELU (WASIU ODUFISAN)
Asia-Pacific Region, PETER W. BAILLIE,
(JOHN G. KALDI)
Canada Region, ROBIN C. MANN,
(DAVID B. OLUTUSIN, MARK S. CHALMERS)
European Region, DAVID R. COOK (IAIN P. WRIGHT,
FRANCOIS JEAN GAUTHIER, OLATUNBOSUN O.
OLAGUNDOYE, MOHIT KHANNA)
Latin America Region, FLAVIO JUAREZ FEJO
Middle East Region, MOUSSTAPHA M. R. ELBAZ
(DAVE L. CANTRELL)

Chairs, Standing Committees

RICK L. ERICKSEN, Board of Certification
JAMES HILL, Bylaws Committee
MARK GALLAGHER, Continuing Education
JAMES HILL, Conventions
DAVID HAWK, Governmental Affairs
RICHARD FRITZ, Awards Committee
RICHARD FRITZ, Membership
RICHARD FRITZ, Nominating
MICHAEL RAINES, Publications
ELEAZAR BENEDETTO-PADRON, Reserves &
Resources
RICK L. ERICKSEN, State Registration
DIANNA PHU, Website

AAPG FOUNDATION

Board of Trustees

JAMES A. GIBBS, Chairman
JOHN J. AMORUSO, Vice Chairman
M. RAY THOMASSON, Secretary
LEE BACKSEN, Treasurer
PAUL M. STRUNK, Trustee
DAVID W. WORTHINGTON, Trustee
DAVID K. CURTISS, Executive Director
DAVID LANGE, Deputy Executive Director

HEADQUARTERS STAFF

Executive Director: DAVID K. CURTISS

Deputy Executive Director: DAVID E. LANGE

Director of Science: TBD

Director of Innovation & Emerging Trends:
SUSAN SMITH NASH

Managing Director of Global Business:
ALAN T. WEGENER

Director of Administration & Programs:
VERN STEFANIC

Africa Region Representative:
DELIA KUYE

Asia-Pacific Representative:
ADRIENNE PEREIRA

European Office Director:
JEREMY RICHARDSON

Latin America Representative:
EMILY SMITH LLINAS

Middle East & India Office Director:
ABEER ALZUBAIDI

AAPG HOUSE OF DELEGATES

Deadline for this section is three months prior to publication.

OFFICERS

CHAIR:

James McGay
(Tulsa, OK)

CHAIR-ELECT:

TBD

SECRETARY/EDITOR:

Stephen Levine
(Cypress, TX)

DELEGATES

*Group Chair

ABILENE

T. J. Hunt

AFRICA

A. Adesida
W. Bosworth
F. Medina
G. E. Odior
L. Olaka
K. B. Trivedi

ALABAMA

D. Hills

ALASKA

TBD

ALBUQUERQUE (NM)

S. P. Cooper
M. A. C. Rogers
D. Ulmer-Scholle

APPALACHIAN (WV)

E. M. Rothman

ARDMORE (OK)

M. D. Allison

ASIA-PACIFIC

A. Bachtiar
P. W. Baillie
H. Darman
K. A. U. R. Ghori
E. A. Ginal-Cumblidge
P. D. Grant
K. Hoshi
W. S. Houston
C. Jia
J. G. Kaldi
J. J. Lambiase
M. McWalter
C. A. Oglesby

AUSTIN (TX)

D. B. Dunlap
P. R. Rose
S. A. Tiller
S. W. Tinker

BATON ROUGE (LA)

TBD

CANADA

P. Bauman
S. Bend
M. L. Blair

D. E. Brown
R. M. Dicks
P. J. English
M. D. Griffi
A. C. Hargreaves
R. T. Lemiski
F. C. Marechal
D. A. D. Scott
G. D. Wach

COAST (CA)

J. T. Williams

CORPUS CHRISTI (TX)

D. O. Moore

DALLAS (TX)

M. E. Bengtson
C. Blair
J. R. Davis*
M. Gallagher
D. Mackenzie
T. G. O'Hare
J. R. Stephens

EAST TEXAS

R. L. Adams

EL PASO

R. Langford

EUROPE

J. Casacao
D. R. Cook
G. D. Couples
J. Craig
H. Cromie
K. Gerdes
C. A. Hamilton
B. Horsfield
K. H. Jakobsson
S. Johnsen
I. A. Kjorlaug
P. R. Krois
R. Kudrewicz
P. A. Kukla
I. Le Nir
A. Nemeth
N. Pimentel
M. Rye-Larsen
N. Scarselli
C. Speh

EVERGLADES (FL)

D. F. Kluesner

FORT SMITH (AR)

T. M. Shields

FORT WORTH (TX)

J. Dugan
TBD - 3

FOUR CORNERS

J. Corken

GEORGIA

D. Bulger

GRAHAM (TX)

C. L. Craig

GRAND JUNCTION (CO)

H. E. Schoenstein

HOUSTON (TX)

J. Allen
R. Archer

R. J. Ardell
L. B. Backsen
S. M. Barber
K. C. Bennett
S. H. Brachman
J. Burton
D. M. Butler
M. M. Cassidy
M. Cisar
G. Coburn
C. Desforges
C. M. Dinger
L. G. Eubanks
K. Frederick
S. L. Getz
T. Y. Ghazi
G. M. Gillis
L. K. Goetz
P. T. Gordon
J. M. Grubb
P. F. Hoffman
I. Immega
M. Jones
J. E. Jordan, Jr.

A. Kahn
B. J. Katz
R. Laidacker
S. D. Levine
W. Matthews
E. A. Medvin
R. B. Meers
B. Milne-Andrews
D. M. Moore
A. L. Parsons
R. E. Pledger
J. V. Richards
W. C. Riese
D. K. Sacrey
P. A. Santogrossi
S. G. Stanley*
C. K. Steffensen
C. A. Sternbach
D. M. Stone
J. W. Tucker
J. Vandenbrink
M. S. Winsten

IDAHO

D. H. Hawk

ILLINOIS

H. E. Leetaru

INDIANA

R. I. Walker

INDIANA-KENTUCKY

J. T. Smith

KANSAS

D. Davis
E. Morrison

KENTUCKY

P. J. Gooding

LA FAYETTE (LA)

T. A. Helms
G. K. P. Munson, Jr.

LATIN AMERICA & CARIBBEAN

V. Abreu

K. Bayer
S. Brandon
C. Griffith
E. Hernandez
H. Krause
P. Marshall
F. Monroy-Santiago
R. M. Portas
F. M. Seminario

LOS ANGELES (CA)

D. D. Clarke
T. Gross

MICHIGAN BASIN

R. H. Gillespie, Jr.
W. B. Harrison, III

MIDDLE EAST

S. Al-Hajri
S. Al-Mahrouqi
H. Al-Otaibi
R. Kuchinski

MISSISSIPPI

M. N. Birdwell

MISSOURI

TBD

MONTANA

M. Millard

NEBRASKA

C. Fielding

NEVADA

B. Ehni

NEW MEXICO

TBD

NEW ORLEANS

A. H. Johnson
E. C. McDade
W. M. Whiting*

NEW YORK

S. A. Epstein
S. Loewenstein

NORTH DAKOTA

J. M. Levy

NORTH TEXAS

C. Reynolds

NORTHERN CALIFORNIA

D. W. Lewis
R. G. Lindblom

NORTHERN OHIO

TBD

NORTHWEST (OR/WA)

J. M. Armentrout
L. B. Thompson

OHIO

P. L. Archer

OKLAHOMA CITY

J. A. Alberts
D. G. Campbell
T. L. Hollrah
L. W. Holman, II
S. A. Ladner
M. W. Smith

PANHANDLE (TX)

J. F. O'Connell

PITTSBURGH (PAPG)

M. A. Jarvis

PITTSBURGH (PGS)

D. A. Billman
A. A. Reynolds

ROCKY MTN. (CO)

S. Adams
J. Birdwell
P. Bucknam
C. E. Campbell
J. J. Cuzella
S. M. Goolsby
J. E. Harris
L. A. M. Johnson
S. G. Kirkwood
G. McClave
R. K. Lewis
R. R. Ray
A. Steinle
R. Sullivan
R. L. Swank

ROSWELL (NM)

TBD

SACRAMENTO (CA)

S. T. Hector

SAN ANGELO (TX)

B. Swartz

SAN JOAQUIN (CA)

A. C. Draucker
C. A. Huggins
L. C. Knauer

SHREVEPORT (LA)

TBD

SOUTH TEXAS

J. Casiano
K. Helm
A. Smith

SOUTHEASTERN (FL)

TBD

TULSA (OK)

R. Fritz
N. J. Hyne
K. L. Luchtel Ferguson
S. Matson

UTAH

C. D. Morgan

WASHINGTON (DC)

J. F. Allan
C. Doolan
C. Enomoto

WEST TEXAS

S. Burke
D. Entzminger
J. Gamrod
M. Raines

WYOMING

L. D. W. George
M. D. Peterson