Contents

Dedication, *Transactions* Volume 50 ................................................................. F-3
Special Commendation Award ............................................................... F-5
Past Special Commendation Award Recipients ........................................... F-6
Past Honorees of *Transactions* Dedications ............................................. F-7
Industry Sponsors .................................................................................. F-8
Technical Papers and Abstracts—Listed by Session ...................................... F-9
Poster Sessions—Thursday, October 26 .................................................... F-16
Poster Sessions—Friday, October 27 ......................................................... F-17
Technical Papers, Abstracts, and Poster Sessions—Listed by Senior Author ........ F-19
Report of the President, GCAGS .......................................................... F-26
Report of the President, GCSSEPM ......................................................... F-28
Report of the General Chairman ............................................................ F-29
Report of the Technical Program Chairmen ............................................... F-31
Report of the Editors ............................................................................ F-32
Distinguished Service Award, GCAGS .................................................... F-33
Distinguished Service Award, GCSSEPM ................................................ F-34
Past Recipients—Distinguished Service Awards, GCAGS ......................... F-35
Past Recipients—Distinguished Service Awards, GCSSEPM ....................... F-35
Honorary Membership, GCAGS ............................................................ F-36
Honorary Membership, GCAGS ............................................................ F-37
Honorary Membership, GCSSEPM ........................................................ F-39
Honorary Membership, GCSSEPM ........................................................ F-41
Past Recipients—Honorary Membership, GCAGS ....................................... F-42
Past Recipient—Distinguished Honorary Membership, GCSSEPM ................ F-43
Past Recipients—Honorary Membership, GCSSEPM ................................... F-43
Outstanding Educator ........................................................................... F-44
Past Recipients—Outstanding Educator Award .......................................... F-45
1999 A.I. Levorsen Memorial Award ....................................................... F-47
1999 Excellence of Presentation Awards, GCAGS ..................................... F-48
1999 Best Poster Awards, GCAGS ........................................................ F-50
Past Recipients—Excellence of Presentation and A. I. Levorsen Memorial Awards, GCAGS ................................................................. F-53
Past Recipients—Best Paper Awards, GCAGS ........................................... F-56
1999 Best Paper Awards, GCSSEPM ....................................................... F-57
Past Recipients—Best Paper Awards, GCSSEPM ....................................... F-61
Officers and Committees, 50th Annual Convention, 2000 ......................... F-63
Board of Directors, GCAGS ................................................................. F-65
Officers of Member Societies ................................................................ F-66
2000 Executive Council, GCSSEPM ....................................................... F-68
Standing Committees, GCAGS ............................................................. F-69
1999-2000 Student Grants, GCAGS ....................................................... F-70
Past Officers and Convention Chairmen, GCAGS ..................................... F-71
Past Officers, GCSSEPM .................................................................... F-72
Bylaws, GCAGS ................................................................................. F-73
Bylaws, GCSSEPM ............................................................................. F-76
Historical Notes on the GCAGS and 2000 Update .................................... F-79
2000 *Transactions* Advertisers .......................................................... A-1–A-32
Technical Papers and Abstracts—Listed by Session

Thursday Morning, October 26

Geology of Mexico

The Sihil Field: Another Giant Below Cantarell, Offshore Campeche, Mexico
Jose A. L. Aquino, Jose M. Ruiz, Marcos A. F. Flores, Jesus H. Garcia

Integrated Characterization of Clastic Reservoirs: A Case Study from Novillero Field, Veracruz, Mexico
Karyna Rodriguez, Eduardo Berendson, Alvaro Chaveste, Bruce E. Hill, Jeff Chen, Nancy L. Englehardt-Moore, Shamsuddin Shenawi, Marcos Quesada, Felipe J. Leon, and Pedro Vela

Best Technology Practices to Reactivate Macuspana Gas Province, Southern Mexico
Quintin Cardenas and Guillermo Perez Cruz

The Petroleum Plays of the Southwestern Gulf of Mexico
Juan Cuevas Leree

The Offshore Golden Lane: New Outline of Opportunities from the Integration of Geological and Geophysical Data
José G. Galicia

Field Studies

Petroleum Geology of Big Escambia Creek Field, Escambia County, Alabama
Gregory J. Halvatzis

Ramos Field, St. Mary and Assumption Parishes, Louisiana —Significant Reserves Added to a 42-Year-Old Field
Bradley R. Broekstra and David R. Anderson

A Case Study of Missed Opportunity: Effect of Fractures on Gas Reserves: Myrtle Springs Field (Smackover), Van Zandt County, Texas
Hugh J. Mitchell-Tapping

Smackover Reservoir Diagenesis in the Appleton Field, Escambia County, Alabama
Doug Haywick, Mary Bee Hall-Brown, Leigh Pfeiffer

A Method for Predicting Sand Thickness from 3D Seismic, Upper Jurassic “Frisco City Sand,” Monroe County, Alabama
Gregory J. Halvatzis and Kevin B. Hill

Norphlet Geology and 3-D Geophysics of Fairway Field, Mobile Bay, Alabama
Chip Story

Exploration Concepts

Structural and Stratigraphic Controls on Petroleum Seeps, Green Canyon and Ewing Bank, Northern Gulf of Mexico: Implications for Petroleum Migration
Gretchen Bolchert, Paul Weimer, and Barry C. McBride
Identification of Hydrocarbon Seeps by Hyperspectral Remote Sensing  
W. S. Duncan and Ronald W. Capps .................................................................75

Origin and Significance of Retrograde Failed Shelf Margins; Tertiary Northern Gulf Coast Basin  
Marc B. Edwards ..................................................................................................81

The Explorationist’s Dilemma: The “Prospector Myth” vs. Systematic Management of Prospect Portfolios  
Peter R. Rose ........................................................................................................95

Using Portfolio Models to Optimize and Communicate Strategy  
Jeffrey Lund and Thomas Adams ........................................................................99

Managing Exploration Risk: Learning from the Past, Applied to the Future  
John Pritchett .........................................................................................................100

Exploration Trends in Louisiana  
M. Byron Miller ......................................................................................................101

Thursday Afternoon, October 26

Eastern Gulf of Mexico

An Update on Sale 181  
Chris C. Oynes .....................................................................................................109

Prospectivity of the Deepwater Clastic and Carbonate Play, Eastern Gulf Sale 181 Area: Play Concepts and Trap Types  
Robert Kukowski ..................................................................................................110

Anatomy of a Nearshore Mixed Siliciclastic-Carbonate Deposit, the Plio-Pleistocene of Southern Broward County, Florida  
Thomas M. Missimer, Robert G. Maliva, Charles W. Walker, and Elizabeth Owosina ........................................111

Geologic Overview of the NE Mississippi Fan and Shelf to West Florida Terrace Region, Offshore Gulf of Mexico  
Norman E. Biles, Andrew E. Hannan, George A Jamieson, and John E. Bain ..............129

Play Opportunities for the Eastern Gulf of Mexico  
H. E. Denman and J. A. Adamick ........................................................................137

Depositional Setting of the Arcola Limestone Member (Campanian) of the Mooreville Chalk, Eastern Gulf Coastal Plain  
Berry H. Tew .........................................................................................................157

Karst Reservoir Play, Cretaceous Shelf Margin Trend, Gulf of Mexico, U.S.A.  
Martin D. Wensrich, S. Frank Rabbio, and Edward A. Clerke, PhD ................................167

Visualization

Multisensory Data Investigation: Adding Touch and Sound to Geoscientific Visualization and Modeling  
Chris Harding, Ioannis Kakadiaris, Bowen R. Loftin ...............................................169
Geovolume Visualization and Interpretation Techniques from Rank Exploration to Secondary Recovery
Elizabeth Lorenzetti Harvey, T. Mike Sheffield, D.E. Meyer, B.A. Payne, J. A. Less, and M.J. Zeitlin...178

Workstation Visualization Techniques that Empower the Geologist: Examples from the Deepwater Gulf of Mexico
Louis Liro, Kimberly Cline, Mary Kadri, Mark Lahr, and Henry Gerke...179

The Impending Obsolescence of Maps
H. Roice Nelson...186

Integrated Reservoir Characterization of Mature Fields: Application of 3-D Visualization Technologies to Reserve Growth Strategies
Noel Tyler, Douglas S. Hamilton, Roger Tyler and Scott D. Rodgers ...187

Exploration Concepts

The Past and Future of the Gulf of Mexico OCS Shelf
Richard Nehring ...193

Three-Dimensional Calculation and Visualization of Fault Gouge Ratio
Karen S. Hoffman and John W. Neave ...203

Temperature Anomaly Mapping: A Risk Reduction Technology
Lloyd Fons and Joe Donovan ...209

Gas Hydrates at Minimum Stability Water Depths in the Gulf of Mexico: Significance to Geohazard Assessment
Alexei V. Milkov, Roger Sassen, Irina Novikova, and Eugeniy Mikhailov ...217

Adapting Probabilistic Methods to Conform to Regulatory Guidelines
Herman G. Acuna and Ron D. Harrell ...225

Friday Morning, October 27

Seismology

Three Dimensional Seismic Inversion and Neural Net Impedance Facies Map in Reservoir Characterization
Sunit K. Addy and Jim Hallin ...227

New Plays in an Old Play: 3D AVO Successes in the Vicksburg of South Texas
Mark E. Gregg and Charles T. Bukowski Jr. ...239

Challenges Associated with Amplitude-Bearing, Multiple-Zone Prospects
Gary Citron and Peter R. Rose ...240

Use of Gravity Data to Enhance Seismic Depth Migration
Mark E. Weber, Brian S. Anderson, and Barry C. Wiggins ...241

Accurate Depth Conversions Reduce Risk
Larry C. Luton and Corine Prieto ...243

Geologic Information and Seismic Data—How Much Do We Need?
Norman Neidell and Rosemary Mullin ...247
Distinguishing Water Saturation Changes from Porosity or Clay Content Changes Using Multicomponent Seismic Data
Fuping Zhu, Richard L. Gibson, Jr., Joel S. Watkins and Sung H. Yuh ................................................................. 249

Examining AVO Crossplots with Visualization Tools
Christopher P. Ross and Mark A. Sparlin ........................................................................................................... 259

Trend Studies and Basin Analysis

Salt Anticline Play in the Mississippi Interior Salt Basin
Bennett L. Bearden, Ernest A. Mancini, and T. Markham Puckett ................................................................. 261

Regional Stratigraphy and Subdivision, Lower Part of Upper Wilcox, Duval Delta Area, South Texas
Richard N. Hargis .............................................................................................................................................. 269

A Reevaluation of the Hackberry: New Life for a Comatose Trend
Michael C. Puzio .............................................................................................................................................. 281

Upper Jurassic Cotton Valley Reef Types and Porosity Distribution, East Texas Basin
Joan M. Spaw, Jack Balderas, and Dan Ziegler ............................................................................................... 283

The Vicksburg of South Texas: A Shelf-Delta System with an Attitude
Tony Whitbread, Todd Nicholson and Bill Owens ............................................................................................. 293

Timing of Source Rock Maturation in the Northern Gulf of Mexico Basin: Results from Thermal Modeling of a Regional Profile
Eric J. Nelson, Paul Weimer, Julia Caldaro-Baird, and Barry McBride .......................................................... 309

Sensitivity Analysis of Petroleum Formation Modeling in the Northern Gulf Basin
Eric J. Nelson, Michael D. Lewan, and Paul Weimer ...................................................................................... 321

Middle Holocene Evolution of the Central Texas Coast
Michael D. Blum and Amy E. Carter .................................................................................................................. 331

Sequence Stratigraphy and Salt Influence

Contrasting Styles of Sediment Delivery to the East Texas Shelf and Slope During the Last Glacial-Eustatic Cycle: Implications for Shelf-Upper Slope Reservoir Formation
John B. Anderson and Antonio B. Rodriguez ................................................................................................... 343

Sequence Stratigraphic Framework and Depositional Variations of Miocene Lowstand Systems Tracts, South Louisiana
Barbara A. Luneau, Jeffrey A. May, Joseph J. Garbee, and Charles Hinson ..................................................... 349

Sequence Stratigraphy, Biostratigraphy, Depositional Environments, and Reservoir Compartmentalization of the Mid-Miocene Queen Bess Field, Jefferson Parish, Louisiana
Grant T. Wach, Rome Lyton, Douglass McCarthy, Laura Korn, and Sharon Moate ........................................... 350

Sequence Stratigraphy and Petroleum Potential of Lower Cretaceous Strata, Mississippi Interior Salt Basin
Ernest A. Mancini and T. Markham Puckett ....................................................................................................... 351
A Comparison of Two Late Pleistocene Shelf-Edge Deltas (Indonesia and Gulf of Mexico)—Stratigraphic Architecture, Systems Tracts, Bounding Surfaces, and Reservoir Potential
Harry H. Roberts, Johan Sydow, John Robalin and Richard Fillon ..........................................................361

Sequence Stratigraphy of the Lower Cretaceous (Albian) Fredericksburg Group, Central and North Texas
Samuel J. Talbert and Stacy C. Atchley ..........................................................369

Sequence Stratigraphy and Chronostratigraphy of Upper Eocene and Lower Oligocene Strata, Eastern Gulf Coastal Plain
Ernest A. Mancini ...........................................................................................................379

Microfossil Characteristics of Deposits of Systems Tracts in the Upper Cretaceous Strata of Mississippi and Alabama
T. Markham Puckett and Ernest A. Mancini ..........................................................389

Sedimentology, Cores, and Petrography

Crossplots of Nuclear Logging Relationships Aid in Estimating Sizes and Shapes of Sands to Improve Maps
Rob L. Allen .............................................................................................................399

Massive Bed-Forms, Mega-Furrows, on the Continental Rise at the Base of the Sigsbee Escarpment, Northwest Gulf of Mexico
William Bryant, Dan Bean, Tim Dellapenna, and Wayne Dunlap ......................................................410

Lower Miocene-Early Pliocene Deposits in the Gulf of Mexico: Regional Sequence Relationships
Richard H. Fillon and Paul N. Lawless ........................................................................411

Sedimentological Characteristics of the Upper Cretaceous Demopolis Chalk, Mississippi
Ezat Heydari .............................................................................................................429

3D Computer Simulation of Carbonate Depositional Facies Distribution and Productivity Rates Using Continuous Set Theory to Mimic Geologists' Reasoning
William C. Parcell ...........................................................................................................439

Sedimentological Nature of the Bryant Canyon Area, Northwest Gulf of Mexico
Efthymios Kontoleon Tripsanas, William R. Bryant, Debora Berti, Niall C. Slowey, Kristy Elston, and Armond Silva ........................................................................451

Kexian Yang, Kai Soon Tan, Karl Kramer and Jeffery M. Yarus ................................................................463

Feasibility Testing of the Proposed Unified Global Expansion and Contraction Cycle Hypothesis Using Spherical Volumetric Calculations for a Simplified Earth Model with an Inner Core of Plasma
Ronald E. Young and Erik W. Young ........................................................................473

Friday Afternoon, October 27

Seismology

Reservoir Characterization Using 3D AVO and 3D Net Sand Prediction
Charles M. Skidmore ...........................................................................................................474
P- and S-Wave Velocity Structures of the Sigsbee Abyssal Plain of the Gulf of Mexico from Ocean Bottom Seismometer Data
   Sangmyung D. Kim, Seiichi Nagihara, and Yosio Nakamura ................................................................. 475

The Use of Coherence Cube Visualization in Picking Seismic Processing Parameters and Post Processing Hybrid Visualization Products
   Otto J. Welper ............................................................................................................................................. 485

Surface Amplitude Mapping of 3D-Seismic for Improved Interpretations of Seafloor Geology and Biology from Remotely Sensed Data
   Harry Roberts, James Coleman, Jesse Hunt, Jr., and W.W. Shedd .......................................................... 495

Trend Studies and Basin Analysis

Stratigraphic Zone-Depth Predictions for Louisiana’s Probable Hydrocarbon Exploration Floor
   Ronald K. Zimmerman ............................................................................................................................... 505

Coalbed Methane Potential in Texas
   Andrew R. Scott ......................................................................................................................................... 509

Regional Petroleum Geoscience Knowledge: Essential to Successful Exploration Strategy in the Gulf of Mexico Basin
   Jeffrey W. Brame ......................................................................................................................................... 527

Sequence Stratigraphy and Salt Influence

Hickory Field: Integrated Technologies Revitalize a Subsalt Prospect
   Scott Bugosh, Todd Fowler, and Bob Golding ............................................................................................ 528

The Smackover “Salt Wall” Play Located Along Intermediate and Large Ridges: Central Mississippi Salt Basin
   Jeffrey S. Requarth, John J. Morris and Marcus A. Brandon ................................................................. 529

Geologic and Microstructural Evidence of Differential Salt Movement at Weeks Island Salt Dome, Iberia Parish, Louisiana
   Kurt M. Looff, Ph.D. ................................................................................................................................. 543

Discovery of Ring Faults Associated with Salt Withdrawal Basins of Early Cretaceous Age in the East Texas Basin
   Steven J. Maione ......................................................................................................................................... 557

Geologic Mapping of Salt Mines in Salt Diapirs: Approaches and Examples from South Louisiana
   Brian E. Lock ................................................................................................................................................ 567

Onshore Louisiana Salt-Withdrawal Minibasins: A New Frontier?
   James J. Willis, Randolph Blackburn, Adam E. Wheeler, and Larry A. Valle ............................................. 583

The Subsalt Play Moves Onshore
   Raymond N. Blackhall and Jim Bob Jackson .............................................................................................. 585
Sedimentology, Cores, and Petrography

Shale Morphology and Seal Characterization of the Lower Atoka Formation Deepwater Deposits, Jacksonville, Arkansas
Christian J. Clark, Arnold H. Bouma, and Bruce M. Samuel .......................................................... 591

Shale Microfacies: Eagle Ford Group (Cenomanian-Turonian) North-Central Texas Outcrops and Subsurface Equivalents
William C. Dawson .................................................................................................................. 607

Paleoenvironments and Early Diagenesis of Paleocene Wilcox Tew Lake Marker Beds, East-Central Louisiana
Lloyd N. Glawe and Alan M. Bailey .......................................................................................... 623

Geology of the Mississippi Valley Gas #1 Terry Bell, Washington County, Mississippi
Danny W. Harrelson and Stephen L. Ingram Sr. ....................................................................... 631

Petrography and Depositional Environments of the Upper Buckner Formation, Smith County, Mississippi
Wenyuan Z. Fleming and Maurice A. Meylan ........................................................................... 637

Seagrass Sediment Particle-Size and Content in Estero Bay Preserve, Southwestern Florida
Hugh J. Mitchell-Tapping and Joseph C. Mallon ....................................................................... 649

Poster Sessions—Thursday, October 26

Italicized listings represent poster sessions that were also presented orally at the convention; they were printed in this volume in order of oral presentation.

Origin of Petroleum in the Mexican Gulf Coast Basin
Mario Alberto Guzman Vega .................................................................................................. 661

The Petroleum System and the Exploratory Reactivation of the Offshore Tuxpan Platform, Eastern Mexico
J. Patino-Ruiz and J.R. Ramon-Ramos ...................................................................................... 662

Revitalized Tithonian-Cretaceous Petroleum System (!), Offshore Campeche, Mexico
María A. Romero I., José Ruiz M., Luis M. Medrano M., Juan Durán G., Roberto Rojas R., Ismael Gutiérrez M. and Olfer Baltazar Ch. ........................................................................ 663

Diapir-Flank Facies Assemblages and Stratal Geometries Within the Tidally Influenced Deltaic System of the Maastrichtian Muerto Formation, La Popa Basin, Northeastern Mexico: An Analogue for the Gulf of Mexico Subsurface
Amy L. Weislogel and Timothy F. Lawton .................................................................................. 669

Efficacy of Climate Variations on Sediment Yield: A Comparison of the Brazos/Colorado, Western Louisiana, and Rio Grande Fluvial Systems During the Last Glacial-Eustatic Cycle
Julia Smith Wellner, Carmen M. Fraticelli, John B. Anderson, and Laura A. Banfield ................ 679

Integrated Characterization of Clastic Reservoirs: A Case Study from Novillero Field, Veracruz, Mexico
Karyna Rodriguez, Eduardo Berendson, Alvaro Chaveste, Bruce E. Hill, Jeff Chen, Nancy L. Englehardt-Moore, Shamsuddin Shenawi, Marcos Quesada, Felipe J. Leon, and Pedro Vela ............................................................................................................. 7

Shale Morphology and Seal Characterization of the Lower Atoka Formation Deepwater Deposits, Jacksonville, Arkansas
Christian J. Clark, Arnold H. Bouma, and Bruce M. Samuel .......................................................... 591

F-16 Gulf Coast Association of Geological Societies Transactions, Volume L, 2000
Otoliths of the Late Miocene Gatun Formation of Panama
Robert L. Martin and Dean A. Dunn

A Method for Predicting Sand Thickness from 3D Seismic, Upper Jurassic “Frisco City Sand,” Monroe County, Alabama
Gregory J. Halvatzis and Kevin B. Hill

Petroleum Geology of Big Escambia Creek Field, Escambia County, Alabama
Gregory J. Halvatzis

Exploration Potential in the Miocene Trend of South Louisiana
Fangjian “Jack” Xue and Kim Hemsley

Field Studies of Breton Sound, Offshore Louisiana
Chacko J. John, Bobby L. Jones, Brian J. Harder, Richard P. McCulloh and Reed J. Bourgeois

Subsurface Sequence Stratigraphic Analysis of the Eocene-Lower Oligocene of Alabama
Andre C. Klein, Gerald R. Baum, Peter R. Vail, and Peter R. Thompson

Exploration Trends in Louisiana
M. Byron Miller

Lower Tertiary Wilcox and Midway Sequences in the Subsurface, Downdip Rio Grande Embayment, South Texas
Robert D. Liska

Two New Stratigraphic Field Discoveries in a Mature Area of Jefferson Parish, Louisiana
Dorothy E. Ballentine and Thomas S. Martinsen

Integrated Reservoir Characterization of Mature Fields: Application of 3-D Visualization Technologies to Reserve Growth Strategies
Noel Tyler, Douglas S. Hamilton, Roger Tyler and Scott D. Rodgers

Poster Sessions—Friday, October 27
Italicized listings represent poster sessions that were also presented orally at the convention; they were printed in this volume in order of oral presentation.

Using a Risk-Based Approach and Integrated Remedial Technologies to Close a Chlorinated DNAPL Site in Under a Decade: A Timeline of Events
Frank E. Bains, Ray Sturdivant, and William H. Schramm

Record of Event Sedimentation in Mississippi Sound
Samuel J. Bentley, Yoko Furukawa, and W. Chad Vaughan

Taxonomic Uniformitarianism in Gulf of Mexico Basin Cenozoic Foraminiferal Paleoecology: Is the Present Always the Key to the Past?
Sylvester Q. Breard, Arden D. Callender, Richard A. Denne, and Michael J. Nault

New Plays in an Old Play: 3D AVO Successes in the Vicksburg of South Texas
Mark E. Gregg and Charles T. Bukowski Jr.
Regional Seismic Interpretation Comparisons Across Deepwater Discoveries of the Gulf of Mexico and the Santos Basin, Offshore Brazil
Andrew E. Hannan, Dianna L. Shelander, Roberto Fainstein and George A. Jamieson ............................................. 737

Geology of the Mississippi Valley Gas #1 Terry Bell, Washington County, Mississippi
Danny W. Harrelson and Stephen L. Ingram Sr. ................................................................. 631

Process Hierarchies Along the Northern Gulf of Mexico
Allen Lowrie and Susan Moffett ................................................................. 742

Evidence of Volcanic Activity During the Cretaceous in the Sunniland Formation of Southwestern Florida: A New Oil Exploration Play
Hugh J. Mitchell-Tapping ........................................................................ 743

Variable Lowstand Deposition and Tectonic Implications Along the Louisiana Continental Margin During Quaternary and Neogene
Susan Moffett, Allen Lowrie, and John Milliman ........................................ 751

3D Computer Simulation of Carbonate Depositional Facies Distribution and Productivity Rates Using Continuous Set Theory to Mimic Geologists’ Reasoning
William C. Parcell ........................................................................ 439

Mapping Bay-Head Deltas Within Incised Valleys as an Aid for Predicting the Occurrence of Barrier Shoreline Sands: An Example From the Trinity/Sabine Incised Valley
Antonio B. Rodriguez and John B. Anderson ........................................ 755

Lower Claiborne Regional Stratigraphic Architecture: Southeast Texas to East-Central Louisiana
Frank S. Vincent and Thomas E. Ewing ......................................................... 759

Sequence Stratigraphy, Biostratigraphy, Depositional Environments, and Reservoir Compartmentalization of the Mid-Miocene Queen Bess Field, Jefferson Parish, Louisiana
Grant T. Wach, Rome Lyton, Douglass McCarthy, Laura Korn, and Sharon Moate ......................................................... 350

Post-Drilling Evaluation of Amplitude-Supported Prospects, Offshore Louisiana
Otis H. Walter ........................................................................ 761

Kexian Yang, Kai Soon Tan, Karl Kramer and Jeffery M. Yarus ......................................................... 463

Feasibility Testing of the Proposed Unified Global Expansion and Contraction Cycle Hypothesis Using Spherical Volumetric Calculations for a Simplified Earth Model with an Inner Core of Plasma
Ronald E. Young and Erik W. Young ......................................................... 473

Palyynomorph Assemblage Zones in the Context of Changing Paleoclimate, Middle Eocene to Early Oligocene of the Northwest Gulf of Mexico
William C. Elsik and Thomas E. Yancey ......................................................... 769
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapting Probabilistic Methods to Conform to Regulatory Guidelines</td>
<td>Acuna, Herman G. and Ron D. Harrell</td>
<td>225</td>
</tr>
<tr>
<td>Three Dimensional Seismic Inversion and Neural Net Impedance Facies</td>
<td>Addy, Sunit K. and Jim Hallin</td>
<td>227</td>
</tr>
<tr>
<td>Crossplots of Nuclear Logging Relationships Aid in Estimating Sizes</td>
<td>Allen, Rob L.</td>
<td>399</td>
</tr>
<tr>
<td>Contrasting Styles of Sediment Delivery to the East Texas Shelf and</td>
<td>Anderson, John B. and Antonio B. Rodriguez</td>
<td>343</td>
</tr>
<tr>
<td>The Sihil Field: Another Giant Below Cantarell Offshore Campeche,</td>
<td>Aquino, Jose A. L., Jose M. Ruiz, Marcos A. F. Flores, Jesus H. Garcia</td>
<td>1</td>
</tr>
<tr>
<td>Using a Risk-Based Approach and Integrated Remedial Technologies to</td>
<td>Bains, Frank E., Ray Sturdivant, and William H. Schramm</td>
<td>714</td>
</tr>
<tr>
<td>Two New Stratigraphic Field Discoveries in a Mature Area of</td>
<td>Ballentine, Dorothy E. and Thomas S. Martinsen</td>
<td>713</td>
</tr>
<tr>
<td>Salt Anticline Play in the Mississippi Interior Salt Basin</td>
<td>Bearden, Bennett L., Ernest A. Mancini, and T. Markham Puckett</td>
<td>261</td>
</tr>
<tr>
<td>Record of Event Sedimentation in Mississippi Sound</td>
<td>Bentley, Samuel J., Yoko Furukawa, and W. Chad Vaughan</td>
<td>715</td>
</tr>
<tr>
<td>Geologic Overview of the NE Mississippi Fan and Shelf to West</td>
<td>Biles, Norman E., Andrew E. Hannan, George A Jamieson, and John E. Bain</td>
<td>129</td>
</tr>
<tr>
<td>The Subsalt Play Moves Onshore</td>
<td>Blackhall, Raymond N. and Jim Bob Jackson</td>
<td>585</td>
</tr>
<tr>
<td>Middle Holocene Evolution of the Central Texas Coast</td>
<td>Blum, Michael D. and Amy E. Carter</td>
<td>331</td>
</tr>
<tr>
<td>Structural and Stratigraphic Controls on Petroleum Seeps, Green</td>
<td>Bolchert, Gretchen, Paul Weimer, and Barry C. McBride</td>
<td>65</td>
</tr>
<tr>
<td>Regional Petroleum Geoscience Knowledge: Essential to Successful</td>
<td>Brame, Jeffrey W.</td>
<td>527</td>
</tr>
<tr>
<td>Taxonomic Uniformitarianism in Gulf of Mexico Basin Cenozoic Foraminifer Paleoecology: Is the Present Always the Key to the Past?</td>
<td>Breard, Sylvester Q., Arden D. Callender, Richard A. Denne, and Michael J. Nault</td>
<td>725</td>
</tr>
<tr>
<td>Ramos Field, St. Mary and Assumption Parishes, Louisiana —Significant Reserves Added to a 42-Year-Old Field</td>
<td>Broekstra, Bradley R. and David R. Anderson</td>
<td>27</td>
</tr>
</tbody>
</table>
Massive Bed-Forms, Mega-Furrows, on the Continental Rise at the Base of the Sigsbee Escarpment, Northwest Gulf of Mexico
Bryant, William, Dan Bean, Tim Dellapenna, and Wayne Dunlap

Hickory Field: Integrated Technologies Revitalize a Subsalt Prospect
Bugosh, Scott, Todd Fowler, and Bob Golding

Best Technology Practices to Reactivate Macuspana Gas Province, Southern Mexico
Cardenas, Quintin, and Guillermo Perez Cruz

Challenges Associated with Amplitude-Bearing, Multiple-Zone Prospects
Citron, Gary and Peter R. Rose

Shale Morphology and Seal Characterization of the Lower Atoka Formation Deepwater Deposits, Jacksonville, Arkansas
Clark, Christian J., Arnold H. Bouma, and Bruce M. Samuel

The Petroleum Plays of the Southwestern Gulf of Mexico
Cuevas Leree, Juan

Shale Microfacies: Eagle Ford Group (Cenomanian-Turonian) North-Central Texas Outcrops and Subsurface Equivalents
Dawson, William C

Play Opportunities for the Eastern Gulf of Mexico
Denman, H. E. and J. A. Adamick

Identification of Hydrocarbon Seeps by Hyperspectral Remote Sensing
Duncan, W. S., and Ronald W. Capps

Origin and Significance of Retrograde Failed Shelf Margins; Tertiary Northern Gulf Coast Basin
Edwards, Marc B

Palyynomorph Assemblage Zones in the Context of Changing Paleoclimate, Middle Eocene to Early Oligocene of the Northwest Gulf of Mexico
Elsik, William C. and Thomas E. Yancey

Lower Miocene-Early Pliocene Deposystems in the Gulf of Mexico: Regional Sequence Relationships
Fillon, Richard H. and Paul N. Lawless

Petrography and Depositional Environments of the Upper Buckner Formation, Smith County, Mississippi
Fleming, Wenyuan Z. and Maurice A. Meylan

Temperature Anomaly Mapping: A Risk Reduction Technology
Fons, Lloyd and Joe Donovan

The Offshore Golden Lane: New Outline of Opportunities from the Integration of Geological and Geophysical Data
Galicia, Jose' G

Paleoenvironments and Early Diagenesis of Paleocene Wilcox Tew Lake Marker Beds, East-Central Louisiana
Glawe, Lloyd N. and Alan M. Bailey

New Plays in an Old Play: 3D AVO Successes in the Vicksburg of South Texas
Gregg, Mark E. and Charles T. Bukowski Jr.

Origin of Petroleum in the Mexican Gulf Coast Basin
Guzman Vega, Mario Alberto
Petroleum Geology of Big Escambia Creek Field, Escambia County, Alabama
Halvatzis, Gregory J. ................................................................. 17

A Method for Predicting Sand Thickness from 3D Seismic, Upper Jurassic “Frisco City Sand,” Monroe County, Alabama
Halvatzis, Gregory J. and Kevin B. Hill ........................................ 55

Regional Seismic Interpretation Comparisons Across Deepwater Discoveries of the Gulf of Mexico and the Santos Basin, Offshore Brazil
Hannan, Andrew E., Dianna L. Sheland, Roberto Fainstein and George A. Jamieson ................................. 737

Multisensory Data Investigation: Adding Touch and Sound to Geoscientific Visualization and Modeling
Harding, Chris, Ioannis Kakadiaris, Bowen R. Loftin .................................................. 169

Regional Stratigraphy and Subdivision, Lower Part of Upper Wilcox, Duval Delta Area, South Texas
Hargis, Richard N. ................................................................. 269

Geology of the Mississippi Valley Gas #1 Terry Bell, Washington County, Mississippi
Harrelson, Danny W. and Stephen L. Ingram Sr. ........................................ 631

Geovolume Visualization and Interpretation Techniques from Rank Exploration to Secondary Recovery
Harvey, Elizabeth Lorenzetti, T. Mike Sheffield, D.E. Meyer, B.A. Payne, J. A. Less, and M.J. Zeitlin ...................... 178

Smackover Reservoir Diagenesis in the Appleton Field, Escambia County, Alabama
Haywick, Doug, Mary Bee Hall-Brown, Leigh Pfeiffer ........................................ 43

Sedimentological Characteristics of the Upper Cretaceous Demopolis Chalk, Mississippi
Heydari, Ezat ................................................................. 429

Three-Dimensional Calculation and Visualization of Fault Gouge Ratio
Hoffman, Karen S. and John W. Neave .................................................. 203

Field Studies of Breton Sound, Offshore Louisiana
John, Chacko J., Bobby L. Jones, Brian J. Harder, Richard P. McCulloh and Reed J. Bourgeois ............................ 699

P- and S-Wave Velocity Structures of the Sigsbee Abyssal Plain of the Gulf of Mexico from Ocean Bottom Seismometer Data
Kim, Sangmyung D., Seiichi Nagihara, and Yosio Nakamura ........................................ 475

Subsurface Sequence Stratigraphic Analysis of the Eocene-Lower Oligocene of Alabama
Klein, Andre C., Gerald R. Baum, Peter R. Vail, and Peter R. Thompson ................................. 711

Prospectivity of the Deepwater Clastic and Carbonate Play, Eastern Gulf Sale 181 Area: Play Concepts and Trap Types
Kukowski, Robert ................................................................. 110

Workstation Visualization Techniques that Empower the Geologist: Examples from the Deepwater Gulf of Mexico
Liro, Louis, Kimberly Cline, Mary Kadri, Mark Lahr, and Henry Gerke ................................. 179

Lower Tertiary Wilcox and Midway Sequences in the Subsurface, Downdip Rio Grande Embayment, South Texas
Liska, Robert D. ................................................................. 712

Geologic Mapping of Salt Mines in Salt Diapirs: Approaches and Examples from South Louisiana
Lock, Brian E. ................................................................. 567
Geologic and Microstructural Evidence of Differential Salt Movement at Weeks Island Salt Dome, Iberia Parish, Louisiana
Looff, Kurt M., Ph.D. .................................................................543

Process Hierarchies Along the Northern Gulf of Mexico
Lowrie, Allen and Susan Moffett ....................................................742

Using Portfolio Models to Optimize and Communicate Strategy
Lund, Jeffrey and Thomas Adams ..................................................99

Sequence Stratigraphic Framework and Depositional Variations of Miocene Lowstand Systems Tracts, South Louisiana
Luneau, Barbara A., Jeffrey A. May, Joseph J. Garbee, and Charles Hinson .................................................349

Accurate Depth Conversions Reduce Risk
Luton, Larry C. and Corine Prieto ....................................................243

Discovery of Ring Faults Associated with Salt Withdrawal Basins of Early Cretaceous Age in the East Texas Basin
Maione, Steven J. .............................................................................557

Sequence Stratigraphy and Chronostratigraphy of Upper Eocene and Lower Oligocene Strata, Eastern Gulf Coastal Plain
Mancini, Ernest A. ...........................................................................379

Sequence Stratigraphy and Petroleum Potential of Lower Cretaceous Strata, Mississippi Interior Salt Basin
Mancini, Ernest A. and T. Markham Puckett ....................................351

Otoliths of the Late Miocene Gatun Formation of Panama
Martin, Robert L. and Dean A. Dunn .................................................687

Gas Hydrates at Minimum Stability Water Depths in the Gulf of Mexico: Significance to Geohazard Assessment
Milkov, Alexei V., Roger Sassen, Irina Novikova, and Eugeniy Mikhailov .................................................................217

Exploration Trends in Louisiana
Miller, M. Byron ..............................................................................101

Anatomy of a Nearshore Mixed Siliciclastic-Carbonate Deposit, the Plio-Pleistocene of Southern Broward County, Florida
Missimer, Thomas M., Robert G. Maliva, Charles W. Walker, and Elizabeth Owosina .............................................111

A Case Study of Missed Opportunity: Effect of Fractures on Gas Reserves: Myrtle Springs Field (Smackover), Van Zandt County, Texas
Mitchell-Tapping, Hugh J. .................................................................29

Evidence of Volcanic Activity During the Cretaceous in the Sunniland Formation of Southwestern Florida: A New Oil Exploration Play
Mitchell-Tapping, Hugh J. .................................................................743

Seagrass Sediment Particle-Size and Content in Estero Bay Preserve, Southwestern Florida
Mitchell-Tapping, Hugh J. and Joseph C. Mallon ................................649

Variable Lowstand Deposition and Tectonic Implications Along the Louisiana Continental Margin During Quaternary and Neogene
Moffett, Susan, Allen Lowrie, and John Milliman ................................751

The Past and Future of the Gulf of Mexico OCS Shelf
Nehring, Richard .............................................................................193
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geologic Information and Seismic Data—How Much Do We Need?</td>
<td>Neidell, Norman and Rosemary Mullin</td>
<td>247</td>
</tr>
<tr>
<td>Timing of Source Rock Maturation in the Northern Gulf of Mexico Basin: Results from Thermal Modeling of a Regional Profile</td>
<td>Nelson, Eric J., Paul Weimer, Julia Caldaro-Baird, and Barry McBride</td>
<td>309</td>
</tr>
<tr>
<td>The Impending Obsolescence of Maps</td>
<td>Nelson, H. Roice</td>
<td>186</td>
</tr>
<tr>
<td>An Update on Sale 181</td>
<td>Oynes, Chris C</td>
<td>109</td>
</tr>
<tr>
<td>3D Computer Simulation of Carbonate Depositional Facies Distribution and Productivity Rates Using Continuous Set Theory to Mimic Geologists’ Reasoning</td>
<td>Parcell, William C</td>
<td>439</td>
</tr>
<tr>
<td>Managing Exploration Risk: Learning from the Past, Applied to the Future</td>
<td>Pritchett, John</td>
<td>100</td>
</tr>
<tr>
<td>Microfossil Characteristics of Deposits of Systems Tracts in the Upper Cretaceous Strata of Mississippi and Alabama</td>
<td>Puckett, T. Markham and Ernest A. Mancini</td>
<td>389</td>
</tr>
<tr>
<td>A Reevaluation of the Hackberry: New Life for a Comatose Trend</td>
<td>Puzio, Michael C</td>
<td>281</td>
</tr>
<tr>
<td>The Smackover “Salt Wall” Play Located Along Intermediate and Large Ridges: Central Mississippi Salt Basin</td>
<td>Requarth, Jeffrey S., John J. Morris and Marcus A. Brandon</td>
<td>529</td>
</tr>
<tr>
<td>Surface Amplitude Mapping of 3D-Seismic for Improved Interpretations of Seafloor Geology and Biology from Remotely Sensed Data</td>
<td>Roberts, Harry, James Coleman, Jesse Hunt, Jr., and W.W. Shedd</td>
<td>495</td>
</tr>
<tr>
<td>A Comparison of Two Late Pleistocene Shelf-Edge Deltas (Indonesia and Gulf of Mexico)—Stratigraphic Architecture, Systems Tracts, Bounding Surfaces, and Reservoir Potential</td>
<td>Roberts, Harry H., Johan Sydow, John Robalin and Richard Fillon</td>
<td>361</td>
</tr>
<tr>
<td>Mapping Bay-Head Deltas Within Incised Valleys as an Aid for Predicting the Occurrence of Barrier Shoreline Sands: An Example From the Trinity/Sabine Incised Valley</td>
<td>Rodriguez, Antonio B. and John B. Anderson</td>
<td>755</td>
</tr>
<tr>
<td>Revitalized Tithonian-Cretaceous Petroleum System (!), Offshore Campeche, Mexico</td>
<td>Romero I., María A., José Ruiz M., Luis M. Medrano M., Juan Durán G., Roberto Rojas R., Ismael Gutiérrez M. and Olfer Baltazar Ch.</td>
<td>663</td>
</tr>
<tr>
<td>The Explorationist’s Dilemma: The “Prospector Myth” vs. Systematic Management of Prospect Portfolios</td>
<td>Rose, Peter R.</td>
<td>95</td>
</tr>
</tbody>
</table>
Examining AVO Crossplots with Visualization Tools
Ross, Christopher P. and Mark A. Sparlin .......................................................... 259

Coalbed Methane Potential in Texas
Scott, Andrew R. ........................................................................................................ 509

Reservoir Characterization Using 3D AVO and 3D Net Sand Prediction
Skidmore, Charles M. .................................................................................................. 474

Upper Jurassic Cotton Valley Reef Types and Porosity Distribution, East Texas Basin
Spaw, Joan M., Jack Balderas, and Dan Ziegler ....................................................... 283

Norphlet Geology and 3-D Geophysics of Fairway Field, Mobile Bay, Alabama
Story, Chip ................................................................................................................. 64

Sequence Stratigraphy of the Lower Cretaceous (Albian) Fredericksburg Group, Central and North Texas
Talbert, Samuel J. and Stacy C. Atchley ................................................................. 369

Depositional Setting of the Arcola Limestone Member (Campanian) of the Mooreville Chalk, Eastern Gulf Coastal Plain
Tew, Berry H. ............................................................................................................. 157

Sedimentological Nature of the Bryant Canyon Area, Northwest Gulf of Mexico
Tripsanas, Efthymios Kontoleon, William R. Bryant, Debora Berti, Niall C. Slowey, Kristy Elston, and Armond Silva .................................................................................................................. 451

Integrated Reservoir Characterization of Mature Fields: Application of 3-D Visualization Technologies to Reserve Growth Strategies
Tyler, Noel, Douglas S. Hamilton, Roger Tyler and Scott D. Rodgers .................. 187

Lower Claiborne Regional Stratigraphic Architecture: Southeast Texas to East-Central Louisiana
Vincent, Frank S. and Thomas E. Ewing ................................................................. 759

Sequence Stratigraphy, Biostratigraphy, Depositional Environments, and Reservoir Compartmentalization of the Mid-Miocene Queen Bess Field, Jefferson Parish, Louisiana
Wach, Grant T., Rome Lyton, Douglass McCarthy, Laura Korn, and Sharon Moate .......................................................... 350

Post-Drilling Evaluation of Amplitude-Supported Prospects, Offshore Louisiana
Walter, Otis H. ........................................................................................................... 761

Use of Gravity Data to Enhance Seismic Depth Migration
Weber, Mark E., Brian S. Anderson, and Barry C. Wiggins .................................. 241

Diapir-Flank Facies Assemblages and Stratigraphic Geometries Within the Tidally Influenced Deltaic System of the Maastrichtian Muerto Formation, La Popa Basin, Northeastern Mexico: An Analogue for the Gulf of Mexico Subsurface
Weislogel, Amy L. and Timothy F. Lawton .......................................................... 669

Efficacy of Climate Variations on Sediment Yield: A Comparison of the Brazos/Colorado, Western Louisiana, and Rio Grande Fluvial Systems During the Last Glacial-Eustatic Cycle
Wellner, Julia Smith, Carmen M. Fraticelli, John B. Anderson, and Laura A. Banfield .......................................................... 679

The Use of Coherence Cube Visualization in Picking Seismic Processing Parameters and Post Processing Hybrid Visualization Products
Welper, Otto J. .......................................................................................................... 485

Karst Reservoir Play, Cretaceous Shelf Margin Trend, Gulf of Mexico, U.S.A.
Wensrich, Martin D., S. Frank Rabbio, and Edward A. Clerke, PhD .................... 167
The Vicksburg of South Texas: A Shelf-Delta System with an Attitude
Whitbread, Tony, Todd Nicholson and Bill Owens ..................................................293

Onshore Louisiana Salt- Withdrawal Minibasins: A New Frontier?
Willis, James J., Randolph Blackburn, Adam E. Wheeler, and Larry A. Valle ..................................................583

Exploration Potential in the Miocene Trend of South Louisiana
Xue, Fangjian “Jack” and Kim Hemsley .................................................................697

Yang, Kexian, Kai Soon Tan, Karl Kramer and Jeffery M. Yarus ........................................463

Feasibility Testing of the Proposed Unified Global Expansion and Contraction Cycle Hypothesis Using Spherical Volumetric Calculations for a Simplified Earth Model with an Inner Core of Plasma
Young, Ronald E. and Erik W. Young .................................................................473

Distinguishing Water Saturation Changes from Porosity or Clay Content Changes Using Multicomponent Seismic Data
Zhu, Fuping, Richard L. Gibson, Jr., Joel S. Watkins and Sung H. Yuh ........................................249

Stratigraphic Zone-Depth Predictions for Louisiana’s Probable Hydrocarbon Exploration Floor
Zimmerman, Ronald K. ..................................................................................505