

The

Volume 5, No. 3
September 2007

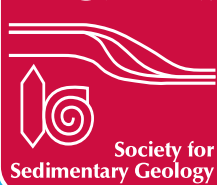
SEDIMENTARY

A publication of SEPM Society for Sedimentary Geology

Record

INSIDE: FROM BAHA TO JACK, EVOLUTION OF THE LOWER TERTIARY
WILCOX TREND IN THE DEEPWATER GULF OF MEXICO
PLUS: ICHNOLOGICAL APPLICATIONS TO SEDIMENTOLOGICAL AND
SEQUENCE STRATIGRAPHIC PROBLEMS RESEARCH CONFERENCE
PRESIDENT'S COMMENTS

1926 **SEPM**



SEPM BOOK STORE

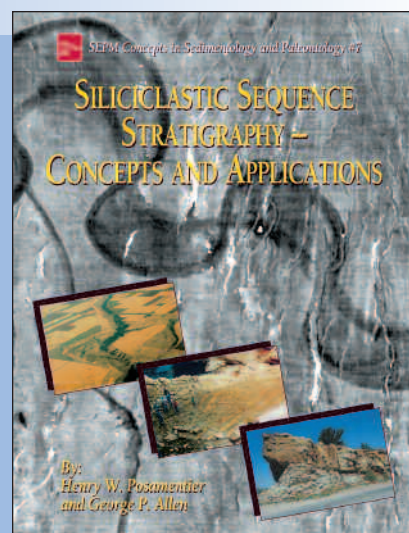
This popular publication available again as a CD reprint!

Siliciclastic Sequence Stratigraphy - Concepts and Applications

Edited by: Henry W. Posamentier and George P. Allen

Sequence stratigraphy has experienced a virtual explosion of applications in recent years. During that time, the concepts upon which sequence stratigraphy is based have been evolving to conform to new observations as well as new types of data. This volume summarizes the current status of this discipline as it applies to siliciclastic deposits. The emphasis in this volume is on sequence stratigraphy as an "approach" to geological analysis, rather than as a model to which all data sets must conform. The expression of sequence architecture and the nature of bounding surfaces is illustrated through examples and applications drawn from a range of data types, including outcrop, core, wireline log, and 3-D seismic data. In addition, sequence expression also is illustrated using examples of modern landforms.

Catalog #85107 • SEPM Member Price: \$40.00



SEPM Miscellaneous #7, a joint SEPM/GSL publication

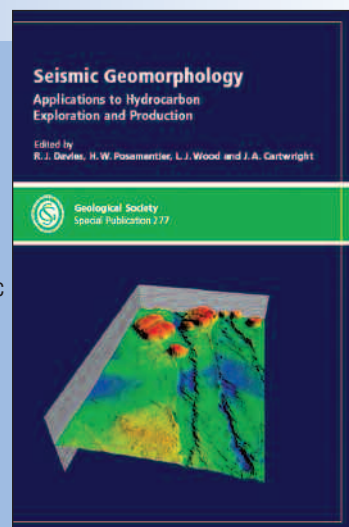
Seismic Geomorphology: Applications to Hydrocarbon Exploration and Production

Edited by: R. J. Davies, H. W. Posamentier, L. J. Wood, and J. A. Cartwright

We are poised to embark on a new era of discovery in the study of geomorphology. In recent years an entirely new way of studying landscapes and seascapes has been developed through the use of 3D seismic data. Just as CAT scans allow medical staff to view our anatomy in 3D, seismic data now allows Earth scientists to do what the early geomorphologists could only dream of - view tens and hundreds of square kilometres of the Earth's subsurface in 3D and therefore see for the first time how landscapes have evolved through time. This volume demonstrates how Earth scientists are starting to use this relatively new tool to study the dynamic evolution of a range of sedimentary environments.

SEPM is the North American distributor for this publication. International orders need to be placed through the Geological Society of London.

SEPM/GSL Member Price: \$70.00



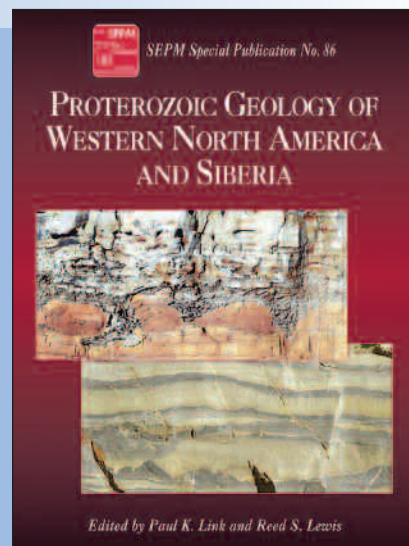
SEPM Special Publication #86

Proterozoic Geology of Western North America and Siberia

Edited by: Paul K. Link and Reed S. Lewis

This volume is a compendium of research on the Belt Supergroup. It is an outgrowth of Belt Symposium IV, held in Salmon, Idaho, in July, 2003, in conjunction with the Tobacco Root Geological Society annual field conference. Because of the geographic extent and great thickness of the Belt Supergroup, years of work have been required before conclusions are "bona fide". The Mesoproterozoic Belt Supergroup of western Montana and adjacent areas is geologically and economically important, but it has been frustratingly hard to understand. The previous Belt Symposium volumes offer an historical view of the progress of the science of geology in the western United States. The advent of U-Pb geochronology, especially using the ion microprobe (SHRIMP) and laser-ablation ICPMS, has injected geochronometric reality into long-standing arguments about Belt stratigraphy. Several papers in this volume utilize these new tools to provide constraints on age and correlation of Belt strata (Chamberlain et al., Lewis et al., Link et al., and Doherty et al.).

SEPM Member Price: \$98.00





Cover Photo: A paleogeographic reconstruction of the Paleocene/Eocene boundary at approximately 56 million years ago. Image provided by R. Blakey.

CONTENTS

- 4** From BAHA to Jack, Evolution of the Lower Tertiary Wilcox Trend In the Deepwater Gulf of Mexico
- 10** Ichnological Applications to Sedimentological and Sequence Stratigraphic Problems Research Conference
- 11** President's Comments
Giving Back to Our Society

The Sedimentary Record (ISSN 1543-8740) is published quarterly by the Society for Sedimentary Geology with offices at 6128 East 38th Street, Suite 308, Tulsa, OK 74135-5814, USA.

Copyright 2007, Society for Sedimentary Geology. All rights reserved. Opinions presented in this publication do not reflect official positions of the Society.

The Sedimentary Record is provided as part of membership dues to the Society for Sedimentary Geology.

Editors

Steven Goodbred

Vanderbilt University, Dept of Earth and Environmental Sciences, Nashville, TN 37235
<steven.goodbred@vanderbilt.edu>

Molly Miller

Vanderbilt University, Dept of Earth and Environmental Sciences, Nashville, TN 37235
<molly.f.miller@vanderbilt.edu>

David Furbish

Vanderbilt University, Dept of Earth and Environmental Sciences, Nashville, TN 37235
<david.j.furbish@vanderbilt.edu>

SEPM Staff

6128 East 38th Street, Suite #308, Tulsa, OK 74135-5814
Phone (North America): 800-865-9765
Phone (International): 918-610-3361

Dr. Howard Harper, Executive Director

<hharper@sepm.org>

Theresa Scott, Associate Director & Business Manager

<tscott@sepm.org>

Bob Clarke, Publications Coordinator

<rclarke@sepm.org>

Michele McSpadden, Membership Services Coordinator

<mwoods@sepm.org>

Edythe Ellis, Administrative Assistant

<cellis@sepm.org>

SEPM Council

Mary J. Kraus, President

mary.kraus@colorado.edu

Dale Leckie, President-Elect

dale_leckie@nexeninc.com

John Robinson, Secretary-Treasurer

robinson_jw@msn.com

Cam Nelson, International Councilor

c.nelson@waikato.ac.nz

James MacEachern, Councilor for Paleontology

jmaceach@sfu.ca

Lynn Soreghan, Councilor for Sedimentology

lsoreg@ou.edu

Christopher Fielding, Councilor for Research Activities

cfielding2@unl.edu

Kitty Lou Milliken, Co-Editor, JSR

kittym@mail.utexas.edu

Colin P. North, Co-Editor, JSR

c.p.north@abdn.ac.uk

Stephen Hasiotis, Co-Editor, PALAIOS

hasiotis@ku.edu

Edith Taylor, Co-Editor, PALAIOS

etaylor@ku.edu

Don McNeill, Co-Editor, Special Publications

dmcneill@rsmas.miami.edu

Gary Nichols, Co-Editor, Special Publications

g.nichols@gl.rhul.ac.uk

Tim Carr, President, SEPM Foundation

tcarr@kgs.ku.edu

www.sepm.org

From BAHA to Jack, Evolution of the Lower Tertiary Wilcox Trend In the Deepwater Gulf of Mexico

Dave Meyer, Larry Zarra, and Janet Yun

Chevron North America Exploration and Production

Deepwater Exploration Projects

1500 Louisiana Street, Houston, TX. 77002

ABSTRACT

Since the 1920's, the Lower Tertiary Wilcox Formation (Lower Eocene/Upper Paleocene) has been a significant hydrocarbon resource producing primarily gas from fluvial, deltaic, and shallow marine sandstone reservoirs from southwest Louisiana through south Texas to northeast Mexico. The total estimated recoverable reserves from this present-day onshore trend are approximately 30 trillion cubic feet gas or 5 billion barrels of oil equivalent (bboe). Not until 80 years later, with the drilling of the BAHA 2 well in March 2001, did industry begin to realize the full extent of linkages within the Wilcox depositional systems, from widespread shelf deposits to extensive deepwater turbidite sands. Ensuing drills in deep, offshore United States territorial waters (Perdido Fold Belt of the Alaminos Canyon Area) led to successes at the Trident and Great White prospects, demonstrating the significant potential of the Lower Tertiary Wilcox section more than 250 miles basinward of its onshore depocenter. In 2002, the Cascade discovery well extended the deepwater Wilcox trend another 275 miles east into Walker Ridge and 350 miles down dip from the shelf deltas. Then in 2006, two years after the 2004 Jack discovery, results of the test well were released. The Jack test established flow rates of over 6,000 barrels of oil per day from only 40% of the reservoir, thus confirming the Deepwater Wilcox as a world-class depositional and potential petroleum system. Currently, we estimate that the Wilcox Trend covers over 34,000 mi² of deepwater in northwest Gulf of Mexico (GoM) and has potential recoverable reserves of 3-15 bboe. If these projections hold, the Deepwater Wilcox could increase proven reserves from GoM deepwaters by 94% to 30 bboe. This would account for a 17% overall increase for the entire GoM basin reserves, which also include the onshore areas (35 bboe) and continental shelf (35 bboe).

THE WILCOX FORMATION AND GULF OF MEXICO PETROLEUM SYSTEM

The Wilcox Formation owes its origin to the Laramide Orogeny, which was a period of mountain building in the western United States responsible for formation of the Rocky Mountains. It is generally believed that collision of the Farallon and North American plates began in the Late Cretaceous, 70 to 80 million years ago (mya), and ended about 35 to 55 mya in the middle to late Lower Tertiary (Paleogene). During this period of mountain building, widespread uplift and erosion led to the development of a tremendous wedge of detrital clastic material. These angular and immature sediments, ranging from quartz and feldspar to volcanic

lithics, comprise the fabric of the hydrocarbon-bearing Wilcox sand system, which was deposited roughly between 60 and 52 mya and transcends the Upper Paleocene and Lower Eocene Epochs.

At that time, paleo-drainage systems similar to the present-day Red, Brazos and Rio Grande Rivers were most likely responsible for delivering newly eroded sediments from the western interior United States to paleo-coastal areas (Fig. 1 and cover). At the continental margin, many sediments were deposited in coastal-plain and shallow-water fluviodeltaic environments, while others found their way to deepwater by way of channel-levee systems and ultimately settling in basin-floor fan environments. Proprietary provenance studies indicate very similar rock characteristics for both the onshore Texas sediments and the deepwater GoM turbidites. Also, palynological studies of deepwater Wilcox Formation rock samples found spores unique to Paleogene tree species of the western interior United States.

Onshore, the Wilcox is made up of stacked late lowstand, transgressive, and highstand systems tracts characterized by fluvial, deltaic and shallow water shelf deposits. However, tracing these sediment pathways basinward to the outer shelf and slope of the Wilcox Formation is hampered by a lack of well control, as well as poor quality seismic data resulting from a regionally extensive decollement listric fault system and widespread salt diapirs and canopies. Offshore, components of the Wilcox have been observed in nearly two-dozen deepwater wells and document extensive deepwater fan systems. This area of the Wilcox Trend in northwest GoM traverses approximately 400 miles from the Alaminos Canyon Area in the west to the Atwater Valley Area to the east. Although the full extent of the basin floor fan system has yet to be defined, it is interpreted to average about 100 miles in the dip direction, resulting in deepwater fan turbidites covering more than 40,000 mi² (Fig. 1). This is similar in scale to the Pleistocene-Recent Mississippi Fan system in the eastern GoM.

In its entirety, the Wilcox Trend extends across several structural provinces, including the Perdido Fold Belt in Alaminos Canyon and the Mississippi Fan Fold Belt in Atwater Valley (Fig. 1). There are three main structural/tectonic styles recognized from this west-east transition. In the west, the Perdido Fold Belt consists of several large salt-cored, thrust, and symmetrical folds of Late Oligocene to Miocene age. Trending northeast-southwest, these folds traverse the boundary between Mexican and U.S. territorial waters (Fig. 2A). In the central portion of the trend within the Keathley Canyon and Walker Ridge areas, structural styles range from relatively low-relief, salt-cored anticlines to salt-withdrawal, three-way salt-truncation

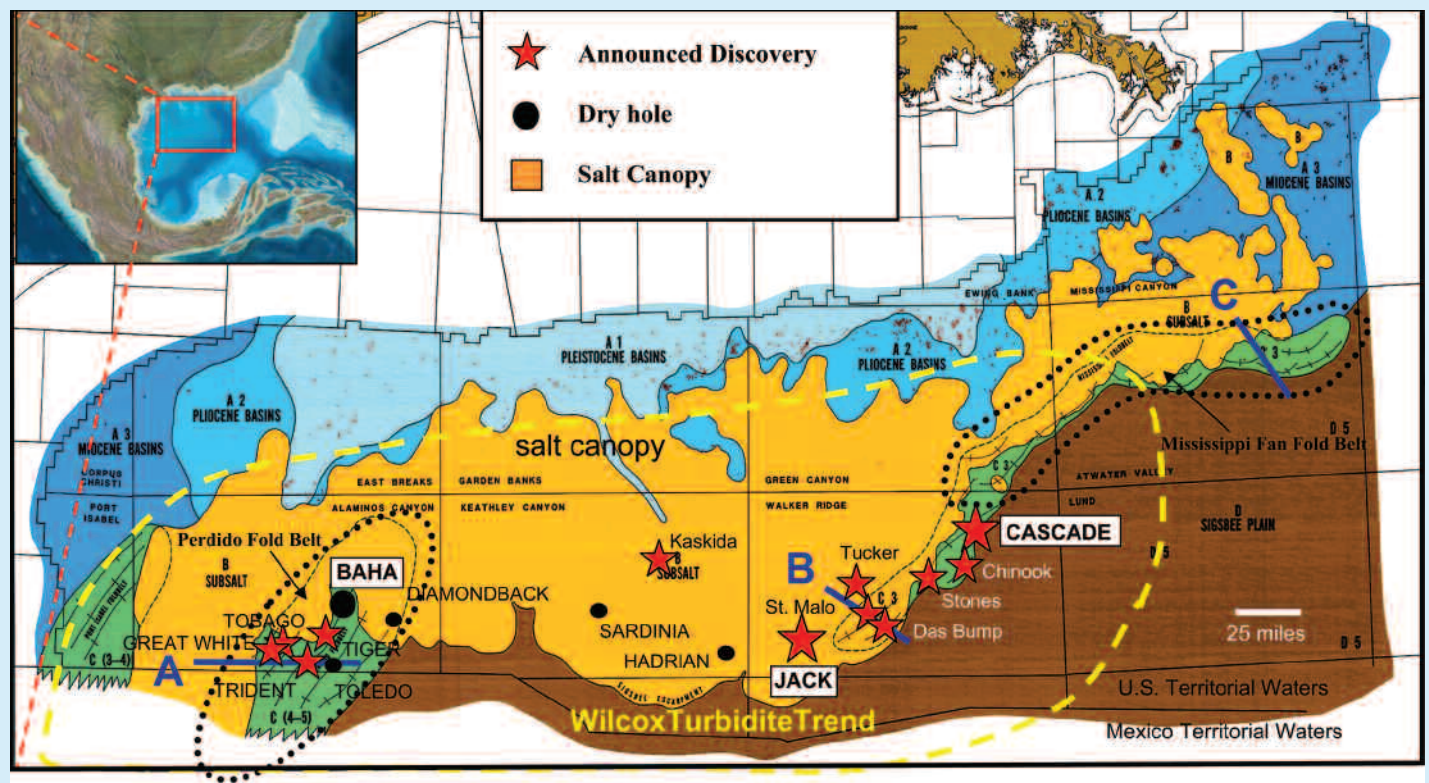


Figure 1. Gulf of Mexico Deepwater Trend Map with key wells, tectonics, salt canopy, and seismic lines.

structures of predominantly Paleocene-Oligocene ages (Fig. 2B). In the East, the Mississippi Fan Fold Belt is characterized by faulted, salt-cored anticlines formed in the Late Miocene during asymmetrical basinward folding and thrusting (Fig. 2C). The complexity of structuring across the Wilcox Trend is further complicated by an extensive salt-canopy system that overlies much of the targeted basin-floor fan turbidites. Salt canopy thicknesses can vary from 5,000' - 20,000' in the area, and with water depths of 5,000' - 10,000', the drill targets are a total of 10,000' to 35,000' below sea level (bsl).

Overall, the GoM petroleum system can be summarized by the stratigraphic column shown in Figure 3, where organic-rich lacustrine to shallow-marine sediments of the Upper Jurassic and deepwater marine carbonates and clastics of the Lower Cretaceous are seen to overlie the Middle Jurassic Louann Salt. This Upper Jurassic to Lower Cretaceous section is the primary source of oil and gas generation in the GoM Basin. The onset of significant deepwater clastic deposition began with formation of the Lower Tertiary Wilcox and has continued with additional pulses during Miocene to Pleistocene lowstands. All key ingredients are now stacked and in place for the 'perfect' petroleum system: 1) a salt substrate that is easily mobilized by gravity, and loading to

create structures (folding) that serve as traps for hydrocarbon accumulation; 2) organic-rich rocks that generate oil and gas under the increased pressures and temperatures following deep burial; 3) a porous sandstone reservoir lying directly above the 'oil kitchen'; and 4) a regionally extensive, non-porous shale top seal to prevent leaking of hydrocarbons from the trap. Where present, the Wilcox is the first potential reservoir in this sequence and must be bypassed (non-porous, poor top seal, no trap) to charge younger reservoirs in Miocene to Pleistocene aged rocks.

BAHA AND THE PERDIDO FOLDBELT

In 1996, almost ten years after the original leasing along the Perdido Fold Belt (PFB) in southeast Alaminos Canyon, the consortium of Shell, Texaco, Amoco, and Mobil drilled the "largest remaining undrilled structure in North America" named BAHA. This test was designed to evaluate the fractured shallow-to-deepwater Jurassic-Cretaceous aged carbonates at a total depth of 22,000' in 7,600' of water. However, the wildcat was abandoned at a total depth of 11,208' bsl due to mechanical problems resulting from a very narrow drilling margin within the Eocene formation. This occurs when the fracture gradient of the rock formation and the

weight of the drilling fluid, which is used to control and stabilize the borehole, are almost equal. Normally, the drilling fluid is greater than the formation pressure and prevents the well from "blowing out". Although the test well was not a commercial success and did not achieve its primary objective, it did prove a working petroleum system and was able to qualify and hold the lease.

Five years later in 2001, BAHA 2 was drilled on the north flank of the same large anticline approximately 2.5 miles northeast of the original test. This wildcat was in 7,790' of water and drilled to total depth of 19,164' bsl. Again, the primary target was fractured shallow to deepwater carbonates with a secondary target in much higher risk deepwater clastic turbidites of the Oligocene Frio Formation and Eocene/Paleocene Wilcox Formation. The well successfully tested the Cretaceous carbonates, but found them to be non-porous, non-fractured chalks and deepwater micritic limestones. However, the well did encounter a very sandy Lower Tertiary section where the Wilcox-equivalent turbidite sands were logged over a 4,500' gross interval with 12 feet of oil in an Upper Wilcox sand, again proving a working petroleum system (Fig. 3). Although the BAHA structural test was a disappointment, the results of this well had two very profound impacts on the petroleum industry operating

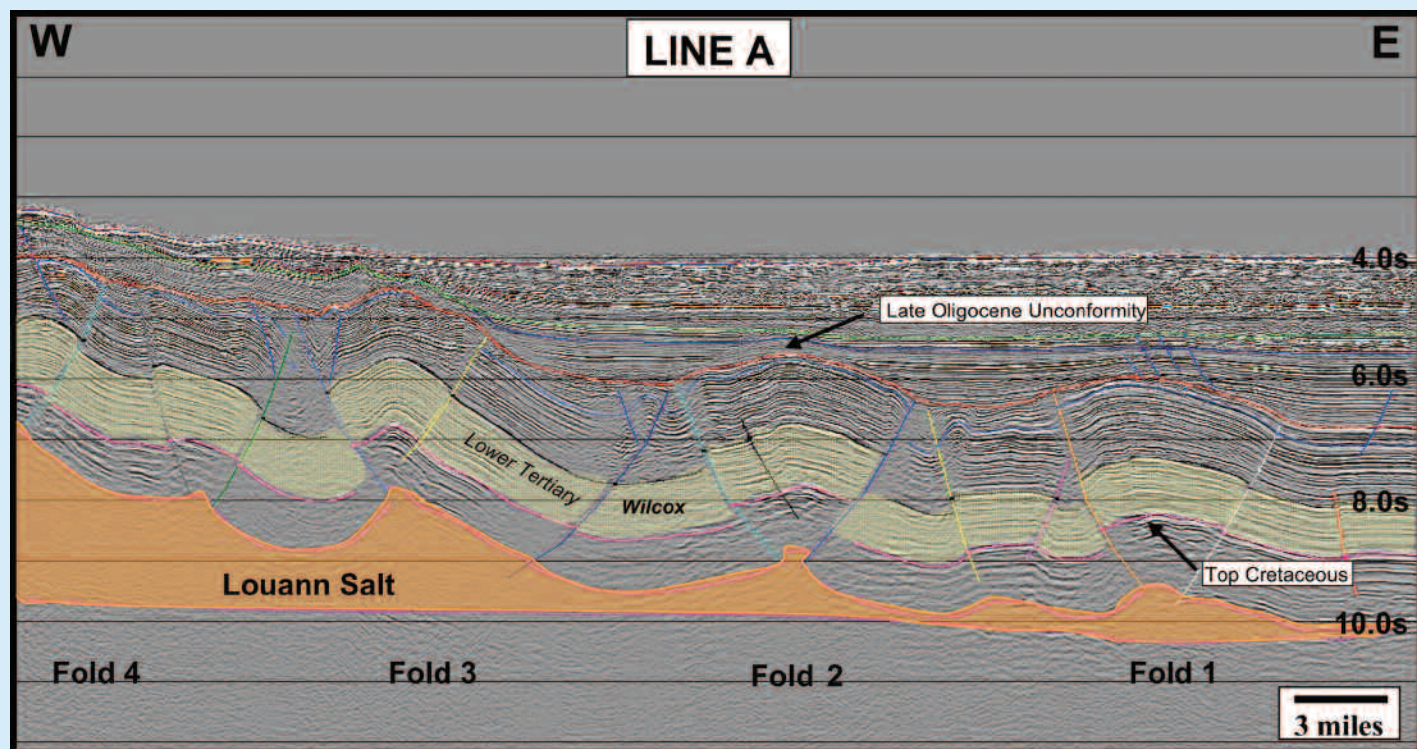


Figure 2a. Thrusted symmetrical box-folds of the Perdido Fold Belt in Alaminos Canyon.

in the area. 1) The massive sand-rich turbidite section of the Wilcox and associated oil show was very encouraging for future exploration, but 2) the final cost to drill the BAHA 2 well

was \$112MM. If this cost could not be significantly reduced, the associated geological and capital risks would leave this new and exciting trend “dead in the water.”

One month after completion of the BAHA 2 well, the Trident wildcat began drilling approximately 30 miles south on an anticlinal closure along the same fold axis

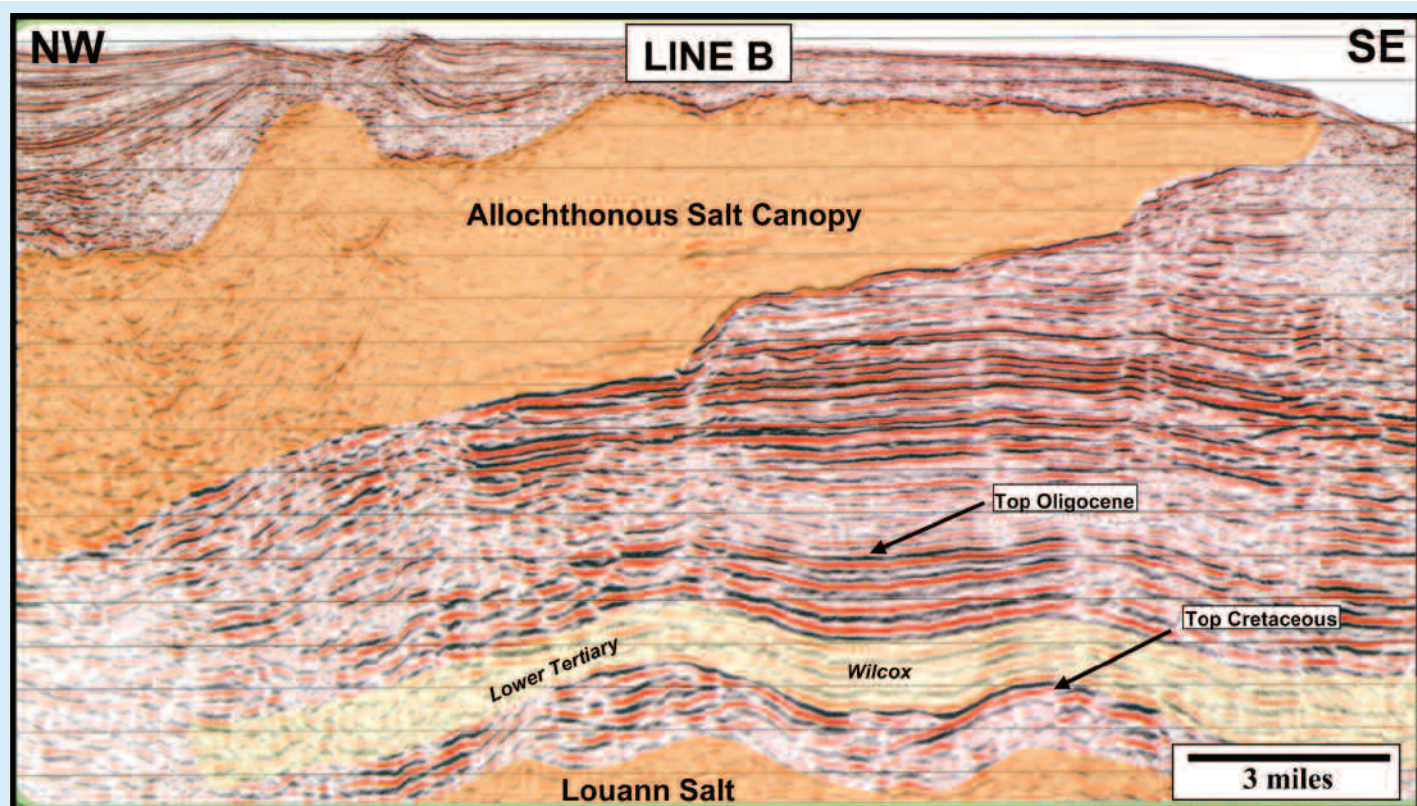


Figure 2b. Relatively low relief salt cored anticlinal structures in Walker Ridge.

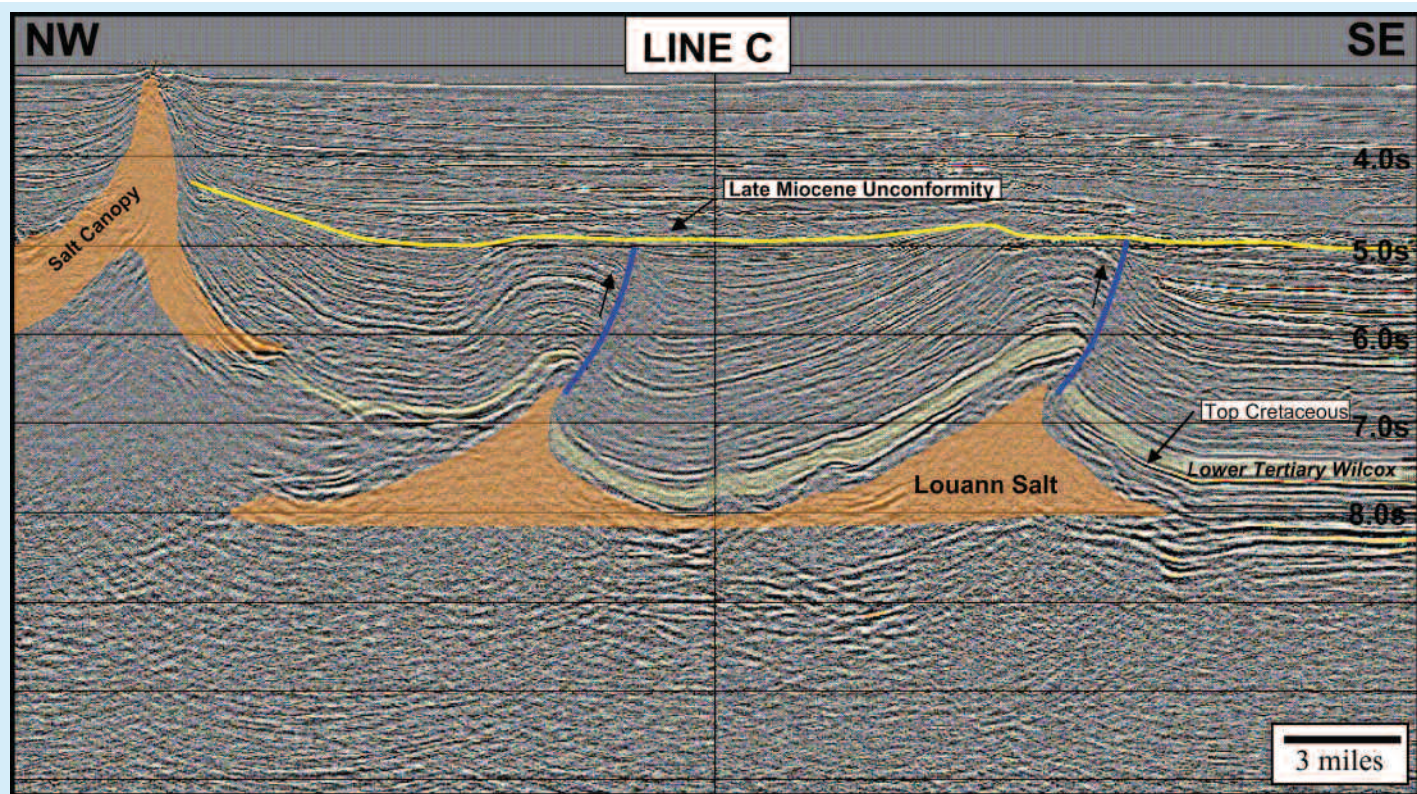


Figure 2c. Asymmetrical thrusts of the Mississippi Fan Fold Belt in Atwater Valley.

(Fig. 4). This well set a world record for water depth of 9,687' and drilled to a total depth of 20,500' bsl. The discovery documented a significant gross hydrocarbon column greater than 300' in the Wilcox section, which was correlative with the BAHA amalgamated sheet sands and channel turbidites, implying a very extensive deepwater fan system. Equally as important as the stratigraphic and depositional implications were the cost improvements. Trident was drilled for \$34MM, which was a 70% decrease from the original trend test. The Perdido Fold Belt play was alive and well.

Several Lower Tertiary Wilcox discoveries followed the success of Trident, including the 2002 Great White discovery, Tobago, and Tiger discoveries (Fig. 1). After drilling Trident, Great White, and the others that followed, integration of the subsurface data (wireline petrophysical data, formation tests, and core interpretation) with 3D seismic resulted in a much more complex and varied depositional model for the Wilcox section. Initially, many depositional models predicted widespread, laterally extensive sheet sands. However, delineation drilling and high-quality seismic data indicate that the Upper Wilcox section is a mud-rich, channel-levee to amalgamated-channel system at the toe of the slope-to-basin transition (Fig. 4). In contrast, the Lower Wilcox

is characterized by sheet to amalgamated-sheet sands deposited in a regionally extensive basin-floor fan system. Generally, this basinward progression of younger strata and waning of the depositional system is believed to track the natural progression of infilling in the Wilcox basin.

CASCADE EXTENDS TREND 300 MILES EAST

In early 2002 while the Great White wildcat was drilling in the PFB, the Cascade well began operations almost 275 miles to the east in the Walker Ridge Area (Fig. 1). This well drilled in 8,140' of water to a total depth of 27,929' bsl, and tested the same Eocene to Paleocene Wilcox section that could be mapped regionally across the GoM with 2D seismic data (Fig. 5). The well found a 1,150' gross hydrocarbon column on the northeast flank of a salt-cored anticline. Regional seismic data indicates a tremendous clastic turbidite wedge that extends and thins from west (PFB) to east (Walker Ridge) (Fig. 5). Although the section is approximately 40% thinner in the Cascade section than in the PFB, it is 50% richer in sand. This trend-extending well was the beginning of a very active exploration program in the east that continues today.

Following the Cascade discovery, six addi-

tional wells have been drilled in Walker Ridge: Chinook Deep, St. Malo, Das Bump, Jack, Stones, and Tucker are all discoveries representing a 100% success rate (Fig. 1). This is phenomenal for exploratory wildcats, where a 20% - 33% success rate is normal for the GoM basin. Successful appraisal drilling has occurred on Cascade, St. Malo, and Jack. After two unsuccessful wildcats were drilled in the Keathley Canyon Area during 2004, another significant discovery, Kaskida, was finally made in 2006 (Fig. 1). This was the first of three wildcats to find hydrocarbons in the Keathley Canyon Area, which has now linked the Lower Tertiary Wilcox Trend from Alaminos Canyon in the west, through Keathley Canyon, to Walker Ridge. At present, the Trend has 12 announced discoveries from 17 wildcat tests, which is a 71% success rate.

JACK FLOW TEST

To date, 12 announced discoveries have proven billions of barrels of oil-in-place resource, but moving these volumes to viable, economically recoverable reserves is still a concern. Reservoir parameters of the Wilcox turbidites have remained remarkably consistent from well to well, even among facies associated with different depositional settings; these include leveed channels, channelized fans, and amalgamated sheet

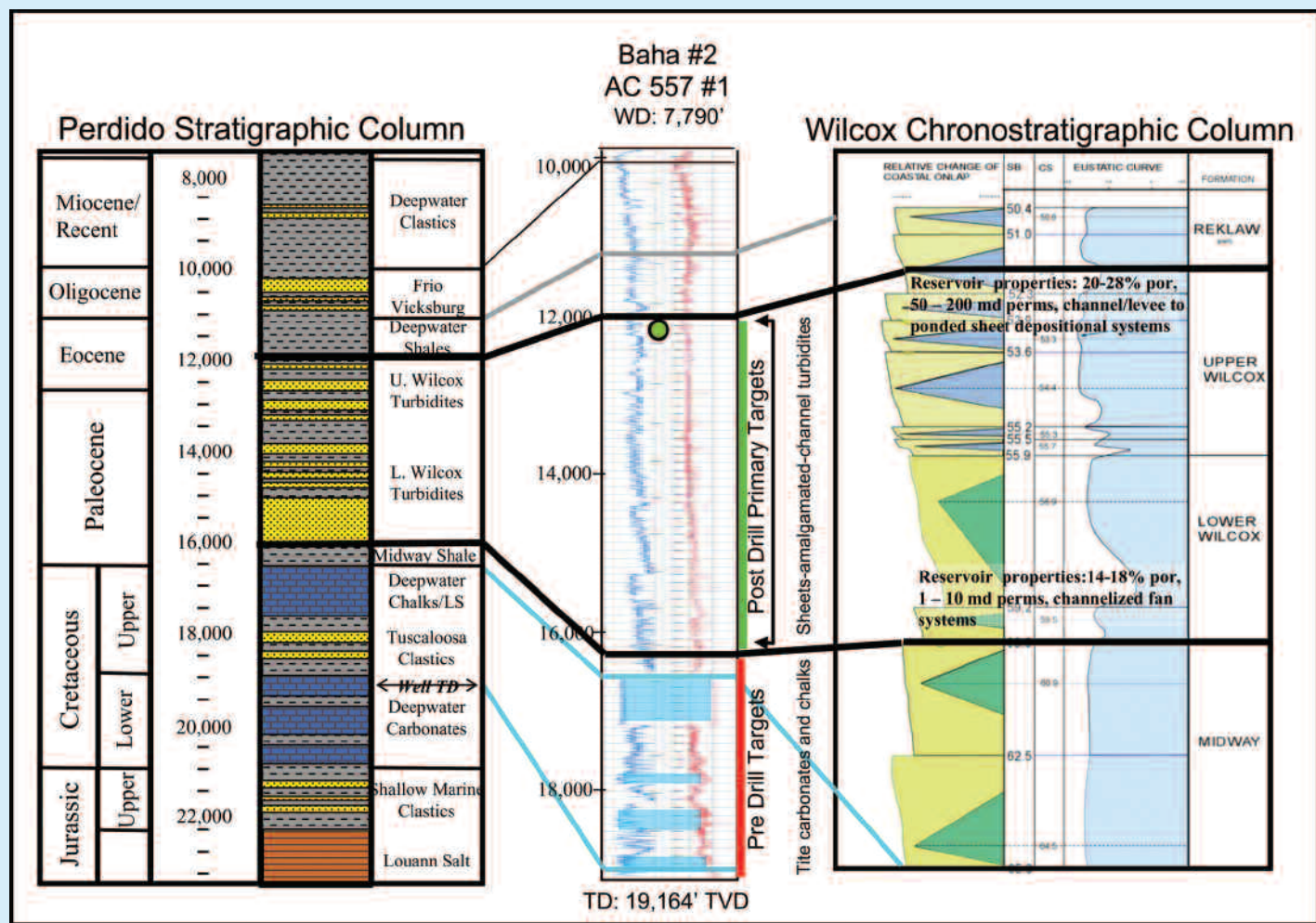


Figure 3. Summary of the BAHA #2 and the significant Wilcox turbidite reservoir section.

sands. However, after four years of drilling with great success, industry remained unsure of the reservoir flow capabilities that are critical for converting this resource base to reserves.

During the first half of 2006, Chevron and its partners, Devon and Statoil, embarked on a record-setting production test of the Jack #2 well drilled in 2005 (Fig. 1). This landmark test set more than six world records while conducting the deepest extended-drill-stem test in deepwater GoM history. The Jack well test was in 7,000' of water and greater than 20,000' below the seafloor. During the test, the well sustained a flow rate of more than 6,000 barrels of oil per day with the test representing approximately 40% of the total net pay measured in the well. Typically, a well in the ultra deepwater environment (greater than 5,000') needs to be able to sustain flow rates of 10,000 - 20,000 barrels of oil per day to ensure a reasonable return on capital invested.

The results of the Jack well test were a significant step forward in the process of moving the billions of barrels of oil resource for

the Wilcox Trend to billions of barrels of recoverable reserves. However, there remain many technological issues that need to be overcome before the present and future resources become economically viable recoverable reserves. These include the development of reservoir characterization models that integrate oil chemistry properties, reservoir framework and flow capabilities, as well as drilling and completion well design, surface facility infrastructure, and hydrocarbon transportation design.

TREND SUMMARY

The majority of the deepwater Wilcox Trend remains unexplored. Most of the Trend is overlain by a thick salt canopy, which until recently has inhibited exploration due to poor subsalt seismic imaging (Fig. 1). Recent advances in seismic acquisition and processing have improved the ability to interpret subsalt, but the individual sand reservoirs remain below seismic resolution. As a result, much of the depositional model and reservoir characterization of the Wilcox is built upon our current under-

standing of deepwater clastic depositional systems. Continuing advances in seismic imaging technologies, additional wells, and research in deepwater clastic systems will help refine the Wilcox depositional model and guide new exploration and production.

At present, the 12 announced discoveries have estimated potential reserves of 2.5 bboe, with an average reserve size per prospect of 210 million barrels of oil equivalent. A total of 17 wildcats with a primary Wilcox target have been drilled resulting in a 71% success rate (Fig. 1). There is considerable upside for the trend with a range of 3-15 bboe total reserve potential with a mean of 8 bboe. This year, Petrobras and Devon have announced a projection of first oil in 2009 for Cascade, and Shell and its partners have announced expected first oil for the Great White Complex in Alaminos Canyon at the turn of the decade. Operators of Jack, St. Malo, Stones, and Kaskida have announced appraisal wells during 2006 and 2007 and several others have announced exploration wildcats for 2007.

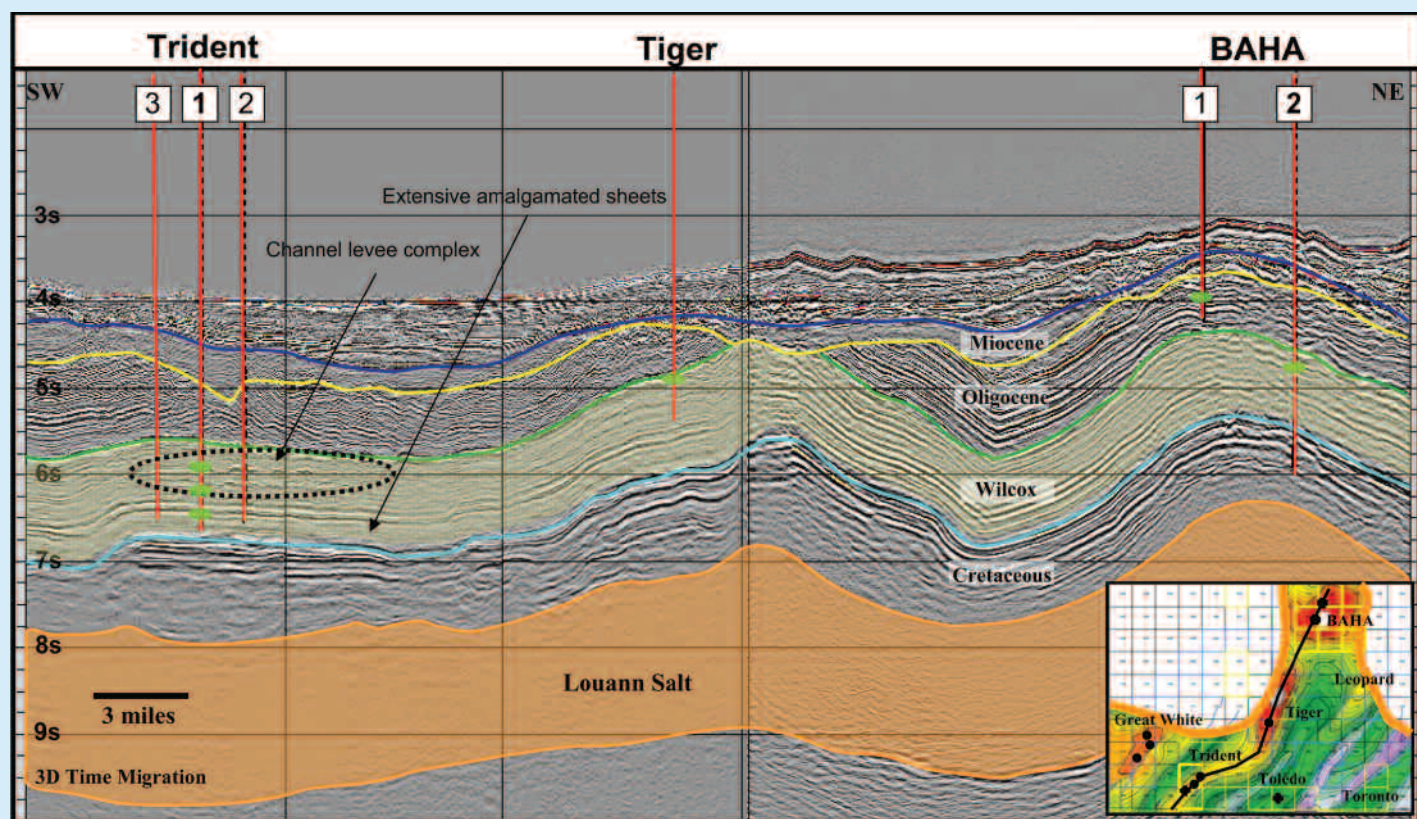


Figure 4. Seismic line tie from BAHA to Trident illustrating seismic character of channel levee systems in the Upper Wilcox and regionally extensive amalgamated sheet sands in the Lower Wilcox.

● Oil Accumulation

ACKNOWLEDGEMENTS

The authors would like to thank Ron Blakey for the paleogeographic reconstruction during late Wilcox time as seen on the front cover, and Fugro, TGS-NOPEC, and

WesternGeco for the seismic sections. We also extend a special thanks to all of our internal Chevron teams, ranging from the GoM Deepwater Seismic Processing, Exploration Regional, Maturation, and

Appraisal Teams, and ETC Deepwater teams for their input and support.

Accepted July 2007

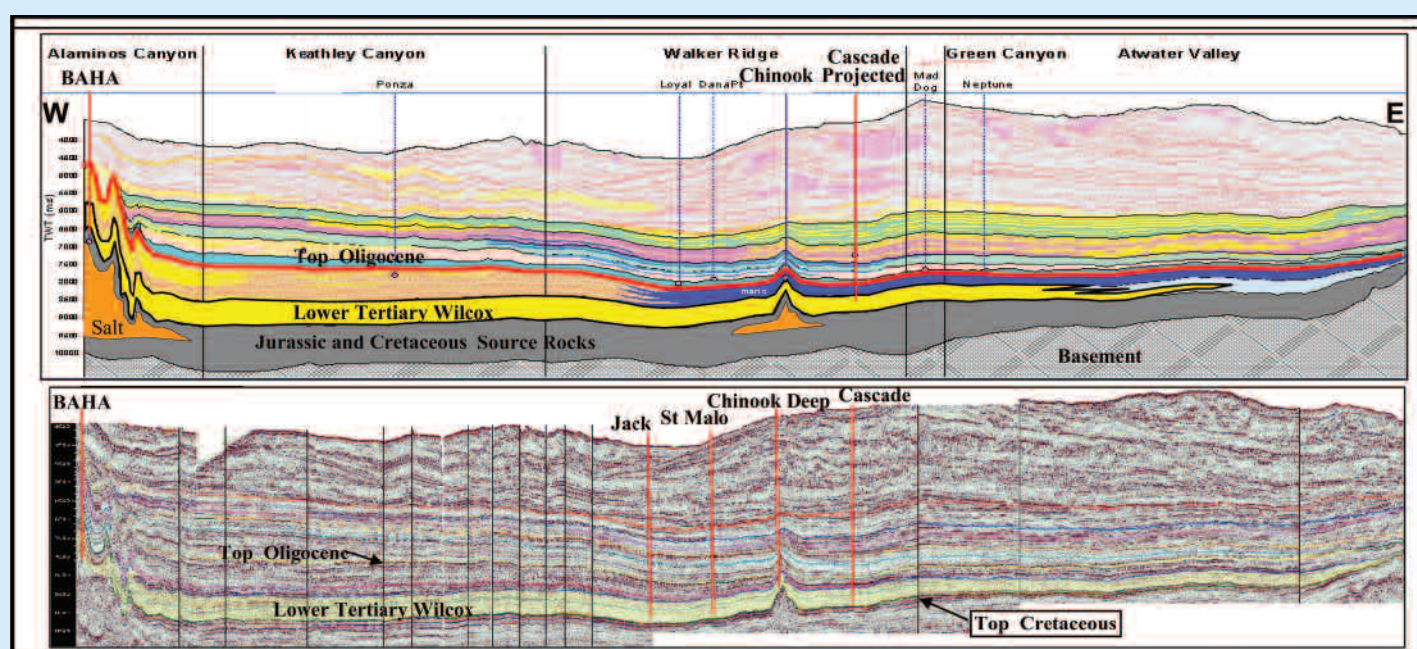


Figure 5. Regional Transect across Alaminos Canyon, Keathley Canyon, Walker Ridge, Green Canyon, and Atwater Valley. The Jack, St. Malo, and Cascade wells are projected into the seismic line.

ICHOLOGICAL APPLICATIONS TO SEDIMENTOLOGICAL AND SEQUENCE STRATIGRAPHIC PROBLEMS RESEARCH CONFERENCE



The SEPM Research Conference "Ichnological Applications to Sedimentological and Sequence Stratigraphic Problems" took place from May 20-26, 2007, in Price, Utah, USA. The conference included 2 days of oral and poster presentations followed by three days of field trips to outcrops of the Cretaceous Ferron Sandstone and

the role of ichnology in reservoir modeling. Keynote addresses were delivered on the ichnofacies paradigm (Dr. James A. MacEachern), the value of integrating ichnology with sedimentology, based on the Permian of Australia (Dr. Chris Fielding), and on enhanced permeability in bioturbated media (Dr. S. George Pemberton). Between talks, participants

visited (provided by the Utah Geological Survey) as a means of comparing the sedimentology, ichnology, and stratigraphy expressed in outcrop to that preserved in core. My own personal highlights from the field excursions include: growth faults and large *Conichnus* observed in the Muddy Creek Section; the classic upward-shallowing, lower shoreface to backshore succession preserved at Gentile Wash; and the large, dinner-plate sized *Rosselia conoides*, also found at Gentile Wash.

Overall, the research conference and field trip were a success. The oral and poster presentations presented some of the most recent advancements in the integration of ichnology with sedimentology and sequence stratigraphy, while the field trip and core displays provided an environment to discuss the application of presented concepts to the rock record. Finally, many thanks are extended to those that made the conference possible, including: ConocoPhillips, Shell International, Statoil, Chevron, Amerada Hess, and BHP Billiton for their generous financial support of both the conference and field trip; Michael Lane and colleagues from the Utah Geological Survey who transported cores of the Ferron Sandstone from Salt Lake City to Price and set them up for display; and, to Theresa Scott, of the SEPM, whose handling of the logistics made the conference possible.

Dr. Shahin Dashtgard
Simon Fraser University



Panther Tongue Member. Forty-two academics and industry professionals from 7 countries, including 11 students whose conference fees were covered by industry donations, attended the conference. The wide range of backgrounds and perspectives of the participants led to many interesting and lively debates, both between talks and during the field trip.

Organized by Drs. James A. MacEachern, Murray Gingras, Kerrie Bann and George Pemberton, the conference brought together industry professionals and academics with a common purpose of improving the integration of ichnology with sedimentology and sequence stratigraphy. Oral presentations covered a variety of topics, including process ichnology and neoichnological studies, the integration of ichnology and sedimentology for resolving the complexities of deltaic successions, and

perused posters that covered related topics as well as many other aspects of ichnological analysis.

The three-day field trip, led by Drs. Janok Bhattacharya and Tom Ryer, took participants to outcrops of fluvial-dominated and wave-influenced deltaic successions exposed in three dimensions. Tom Ryer generously delivered overview lectures on the paleogeography, stratigraphy, and depositional history of the Ferron Sandstone during breakfast. Once in the field, Janok and Tom toured attendees around to spectacular outcrops that allowed participants to observe the variability in the sedimentology and ichnology of deltaic successions that had been discussed at length during the presentation component of the conference. At the end of each day, participants were invited to view cores of the Ferron Sandstone cut from the outcrop areas

PRESIDENT'S COMMENTS

Giving Back to Our Society

SEPM is a society that belongs to all of its members, and the volunteer activities of all of us are important to the vitality of the society. My first column as President acknowledged the time and energy given to SEPM by members of Council and members of the Annual Meeting Committee for the Long Beach meeting. This article focuses on other contributions made to the society and contributions that each of us can make to the society and, thus, to sedimentary geology.

SEPM is fortunate to have a series of standing committees that are responsible for the smooth operations and scientific activities of the society. These include the: **The Headquarters and Business Committee**, which focuses on headquarters staffing, budgets and financial policy for the society;

The Investment Committee, which is charged with long-term investing for the society and, thus, provides SEPM with an important cushion in times of financial difficulty and monies for special projects that enhance the scientific mission of SEPM; **The Nominating Committee**, which is responsible for identifying nominees for the various offices of the Society; and **The Research Concepts Committee**, which oversees the research conferences sponsored by the society and the activities of the different research groups.

One of the most pleasant responsibilities I carried out this spring was informing several geoscientists that they had been chosen to receive awards from SEPM. My conversations with awardees followed a year-long process by a series of Award Committees. SEPM annually presents six major awards: the Twenhofel Medal, Pettijohn Medal, Moore Medal, Shepard Medal, James Lee Wilson Award, and Honorary Membership. Each of those awards is conferred by Council at the recommendation of a committee, which actually does the work. Those committees seek to identify worthy nominees for the awards and then

discuss and vote on the recipients of each award.

In addition to these standing committees, other SEPM activities require significant contributions from members. The SEPM Organizing Committee for the 2008 Annual Meeting in San Antonio has been hard at work for some time and the Organizing Committee for the 2009 Meeting in Denver is already busy. The success of those meetings depends not only on the organizers but also on the individuals willing to offer short courses and field trips and willing to chair technical sessions.

Some of the committees that have been described require infrequent, but regular, meetings. For example, the Headquarters and Business Committee meets three times a year in Tulsa, and members must be willing to sacrifice a day or two of their time three times a year to serve on this committee. Between meetings, that committee conducts business via email. The business of other committees is handled entirely by email and/or phone. I realize that not all members have the time available to serve on these committees. But members who are busy and not able to serve on committees can make other key contributions to the society. In particular, I would like to urge members to consider nominating outstanding sedimentary geologists for SEPM Awards and serving as judges of technical sessions at the Annual Meeting.

Each year, SEPM puts out a call for nominees for SEPM awards. Few members answer this call by submitting names and helping with the actual nominations. This does not mean that excellent nominees are not evaluated every year. It does, however, mean that the members of the committee for a particular award are often responsible for identifying the nominees. This is an area in which each one of us can volunteer. Each of us has had influential teachers and academic advisors. Each of us knows colleagues or mentors who are excellent in some aspect of sedimentary

geology. Many of you are faculty who have former students deserving of the James Lee Wilson Award for *Excellence in Sedimentary Geology by a Young Scientist*. I urge each of you to consider taking a few minutes to check the online nomination form at:

<http://www.sepm.org/awards/nomination-form.htm> or contact Michele Woods at Headquarters (mwoods@sepm.org). As a society, it is essential that we promote sedimentary geology by acknowledging the leaders and outstanding individuals in our field.

As I prepared for the AAPG/SEPM annual meeting in Long Beach last April, I received several emails from Michele Woods requesting help with the scientific judging of oral presentations and posters in SEPM technical sessions. I urge those of you who attend the annual meeting to contribute your time as a judge. Yes, that may mean you need to stay through an entire session rather than splitting your time among several sessions or schmoozing in the halls or at the espresso stand. It may mean you attend some talks or view some posters in which you have little interest. But, if Michele emails asking for help, please say you will be willing to judge. You may even find that you enjoy the experience and learn a great deal about some aspect of sedimentary geology.

SEPM offers a variety of ways for members to be engaged with the society. I have touched on but a few here. I have not mentioned other vital activities such as participating in research groups, writing papers for the SEPM journals and other publications, and reviewing manuscripts for those publications. I have highlighted two other important contributions that members can make, and I hope that many of you will consider giving back to our society in the ways suggested.

Mary Kraus, President



A • N • N • O • U • N • C • E • M • E • N • T • S

SEPM Activities at GSA-Denver, Oct 27-31, 2007

- Saturday, Oct 27: 8 a.m. - 5 p.m. SEPM Council Meeting. Hyatt - Mineral Hall G
- Saturday, Oct 27: 6 p.m. - 9 p.m. Seds & Suds Open Forum. Hyatt-Capital Ballroom.
Sponsored by **nexen**
- Sunday, Oct 28: 5 p.m. - 7 p.m. Icebreaker. SEPM Booth. Denver Convention Center
- Sunday, Oct 28: 7 p.m. - 10 p.m. Geosystems Research Group. Hyatt - Mineral Hall G
- Monday, Oct 29: 5 p.m. - 6 p.m. Joint SEPM/SGD Reception.
Denver Convention Center Rm. 506

Support of Earth Science Week 2007 (October 14-20).

The American Geological Institute (AGI) is publishing its "The Pulse of Earth Science" Toolkit to enable teachers, students, and the public alike to actively participate in this year's event.

The Toolkit can be pre-ordered now. Individual kits are available for the cost of shipping and handling (\$6.95 in the United States). Bulk pricing is available. Visit <http://www.earthsciweek.org/materials/index.html> to order the 2007 Earth Science Week Toolkit.

To learn more about this event, please visit <http://www.earthsciweek.org/>.

Contact: Geoff Camphire gac@agiweb.org

2008 SEPM Research Conferences

(exact dates to be determined)

May 2008: Clinoform Sedimentary Deposits, Rock Springs, Wyoming, USA

May 2008: Carbonate Paradigms, Miami, Florida, USA

June 2008: Outcrops Revitalized - Tools, Techniques and Applications

Fall 2008: The Mississippi River System - From Source to Sink, Mississippi and Louisiana, USA

2008 Wilson Awardee Announced

The James Lee Wilson Award For Excellence in Sedimentary Geology Research by a Young Scientist will be presented to Timothy Naish (GNS Science, New Zealand). The award will be presented at the SEPM Awards Ceremony, April 22, 2008, in San Antonio, Texas.