
MEETINGS & CONFERENCES

Talks, Papers, etc. by NDGS Staff Geologists

compiled by John Bluemle

[Editor's Note: I asked each NDGS geologist to provide a listing of talks, formal papers, etc. they presented over the past six months and several responded. I'll briefly summarize their comments.]

Randy Burke

On April 15, Randy presented a paper in Missoula at the Rocky Mountain Sectional GSA meeting. (See the listing of new publications by Survey employees on page 27). His paper dealt with non-Waulsortian reefs and documented the occurrence of true ecologic reefs in the Lodgepole Formation. Previously, only mud-dominated buildups of the Waulsortian type had been recognized. Recognition and understanding of the different types of Lodgepole buildups is a key to finding others like those in the Dickinson buildup complex that have produced over 26 million barrels of oil and 3.6 MMCF gas.

In conjunction with the same meeting, Randy led a field trip with George Stanley of the University of Montana to the Little Belt Mountains in central Montana to look at the Lodgepole Formation to compare in outcrop the typical thin-bedded limestones with the unique coral-stabilized grainstone reefs.

Randy presented a paper on May 16, this one in El Paso, at the SEPM-IAS Research Conference on Permo-Carboniferous Carbonate Platforms and Reefs (see page 28). He discussed the types and controls on Lodgepole buildups in the Williston Basin for comparison with those of similar types and ages around the world.

John Hoganson

John spoke at the 4th annual Missouri River Natural Resources Conference on May 22 in Bismarck on the topic "Geology and Paleontology along the Missouri River Corridor in North Dakota." He gave two presentations at the National Gem, Mineral, and Fossil show in Winnipeg, Manitoba on May 27 and 28. They were titled: "Evolutional History of Tertiary Mammals in North Dakota and Manitoba" and "Mosasaurs and Other Marine Creatures from the Cretaceous of North Dakota and Manitoba."

On June 29, John spoke in Edinburg, North Dakota at the Red River resource conservation and development meeting: enhancing income through alternative enterprises and tourism. John's talk was titled "Paleontological

Excavations as Ecotourism Adventures."

Julie LeFever

Julie presented a paper on January 26 titled "Drilling of oil-bearing shales horizontally: the Bakken Formation - successes and failures." The presentation was at the Eastern Gulf Region Technology Workshop in Jackson, Mississippi. The workshop was sponsored by the Petroleum Technology Transfer Council (PTTC).

Karen Mitchell

Karen Mitchell, who is the Survey's State ESIC (Earth Science Information Center) Coordinator, attended a regional meeting of USGS State ESIC affiliates April 4-5, 2000, hosted by the Conservation and Survey Division of the University of Nebraska-Lincoln in Lincoln, Nebraska. Representatives from nine of the 15 states in the Mid-Continent region, as well as USGS representatives from the regional office in Rolla, MO, the national headquarters in Reston VA, and the EROS Data Center in Sioux Falls, SD, attended the workshop. The meeting was held to acquaint state ESIC coordinators and personnel with the products and services available through the USGS. It also provided an opportunity to introduce new USGS products and sales interfaces, as well as provide training in the new technology

Karen completed the Integrated Emergency Management Course conducted by FEMA's National Emergency Training Center in cooperation with the North Dakota Division of Emergency Management. The course was offered January 24-27, 2000, in Bismarck. Participants studied the integrated approach to emergency management, including hazard mitigation, preparedness, emergency response, and recovery. Over 40 state and federal agencies, and many local government and emergency management personnel, participated in the classes and a two-day response and recovery exercise to improve our ability to handle emergency situations, like the 1997 winter storm and flood events.

Ed Murphy

Ed spoke on the status of North Dakota's soils digitization program at the annual meeting of the North Dakota Professional Soil Classifiers Association in Bismarck on January 14.

On April 5, Ed gave a talk on the scenic beauty of western North Dakota to the Golden Circle Chapter of Kiwanis in Bismarck. This was similar in scope to a talk he presented to the North Dakota Geological Society last December. At the end of June, 2000, Ed will present a talk on

slope stability problems in western North Dakota at a national conference of the American Society of Highway Engineers in Bismarck.

John Bluemle

Since the beginning of the year, I've given a number of talks and presented a couple of formal papers. I'll summarize them here, in chronological order.

On February 8, I gave a presentation at the North Dakota Geological Society in Bismarck on the topic of creationism and evolution. On February 17, Julie LeFever, Ryan Waldkirch, and I gave a presentation in Grand Forks, at a public forum held at the Grand Forks Herald dealing with the topic of flooding in the Grand Forks-East Grand Forks area. This presentation was essentially a summary of the recent NDGS publication titled "Flooding in the Grand Forks-East Grand Forks, North Dakota and Minnesota Area" and it included recommendations for dealing with future floods (see discussion of the publication under "New Publications"). Only a few people showed up for our talk, but I thought it was well received by those who came. On February 22, I spoke to a Tri-County University seminar in Fargo on the geology of North Dakota. This was one of a series of evening lectures dealing with the overall topic of global climate change that Dr. Allen Ashworth, Professor of Geology at NDSU, organized. My talk fit in because it dealt with the way many of North Dakota's landforms developed, ultimately as a consequence of drastic climate change – glaciation and the melting of the glaciers at the end of the Ice Age, in response to global warming on a large scale.

Apart from testimony before the Budget Committee of the North Dakota Legislature, I didn't give any talks in March, but there were four in April. On April 3, I spoke to the Bismarck Lion's Club on Climate Change (this was somewhat of a repeat of a talk I had given to the same group last year, but no one seemed to mind – it was what they asked for!). I was in Devils Lake on April 12 to speak twice on the flooding problem there. I first addressed the Devils Lake Joint Board and then spoke to a combined luncheon of Rotary and Kiwanis. On April 19, I presented a paper titled "Rate and Magnitude of Past Global Climate Change" at the annual meeting of the American Association of Petroleum Geologists in New Orleans. This was one of several papers presented as part of a Theme Session: "Global Climate Change and Consequences."

In May I gave a couple of talks. On the 6th in Bismarck I spoke on the general topic of flooding in North Dakota to the Veterans of the Battle of the Bulge. On May 9th, I gave essentially the same talk on climate change that I had given in April in New Orleans, this time at the Eighth International Horizontal Well Workshop in Bismarck (see article elsewhere in this newsletter).

In June I gave a couple of talks. On the 9th, I was in Casper, Wyoming to speak on climate change at a meeting of the Wyoming Geological Association. And, on the 30th, I gave another talk on Devils Lake at a meeting of the American Society of Highway Engineers, which held its National Conference here in Bismarck.

Eighth International Williston Basin Horizontal Well Workshop Held in Bismarck, North Dakota

by Paul Diehl

The Eighth International Williston Basin Horizontal Well Workshop was held Sunday, May 7th through Tuesday, May 9th at the Radisson Inn in Bismarck, North Dakota. The customary Sunday evening Ice Breaker "kicked off" the meeting. Bright and early Monday morning, North Dakota Governor Edward Schafer opened the technical presentations sessions by welcoming the horizontal workshop participants to North Dakota. Heidi Heitkamp, North Dakota Attorney General, also addressed the gathering Monday morning with remarks of encouragement and support.

As it has been since inception, the workshop was hosted and organized by the North Dakota Geological Survey and the Saskatchewan Energy and Mines. Twenty-five energy industry companies helped sponsor the workshop with their generous contributions. We thank them for their continued support which allows us to minimize participants' expenses.

Prior to the workshop, a five-hour short course on the use of CO₂ for enhanced oil recovery was conducted on Sunday afternoon. The short course was presented by Dr. George Besserer of RES MOD MAN International Petroleum Consultants, Calgary, Alberta, and sponsored by Dakota Gasification Company, Souris Valley Pipeline LTD., and Enbridge Pipelines (Saskatchewan), Inc.

This year there were 323 workshop registrants (Fig. 1) who came from three countries, 12 states, and four provinces (Fig. 2). Forty-nine displays and posters representing energy industry service companies, government agencies, and consultants were set up in the courtyard and the Grand Pacific ballroom areas of the Radisson Inn. Oral presentations included updates of horizontal well activity in the states and provinces within the Williston Basin. Technical papers including topics such as slim-hole rotary steerable short radius horizontal drilling systems, microbial technology for improved oil production and gas control, *in-situ* acid production for completion and stimulation of horizontal wells, design and execution of horizontal CO₂ injectors in the Weyburn Field, geosteering in targets with subtle gamma ray character utilizing true stratigraphic position modeling, horizontal drilling in Mission Canyon fields, basement control on lower Paleozoic exploration potential and production were presented on Monday and Tuesday. A total of twenty-three presentations were made during the two day workshop. There was also ample time allotted for the participants to engage in individual discussions and to conduct business.

During the Monday luncheon, workshop participants had the opportunity to hear an address by Eldon Lautermilch, Minister of Saskatchewan Energy and Mines. Roger Johnson, North Dakota Commissioner of Agriculture, also spoke to the group during the Tuesday lunch. We thank these people, Heidi Heitkamp, and Governor Schafer for making time in their busy schedules to speak to the workshop participants.

A 300-page workshop volume containing the workshop agenda; an outline, abstract, or paper of the oral presentations was provided to all registrants. (Table of Contents may be viewed on the NDGS web page.) This workshop volume can be purchased from the Saskatchewan Energy and Mines for \$20 US (\$25 Canadian). Please make checks payable to **Horizontal Workshop** and mail to: Brenda Maximuik, Horizontal Well Workshop, c/o Saskatchewan Energy and Mines, 2101 Scarth Street, Regina, SK, S4P 3V7 Canada. Brenda can be reached at (306) 787-7662, fax (306) 787-2333, or e-mail brenda.Maximuik@sem.gov.sk.ca.

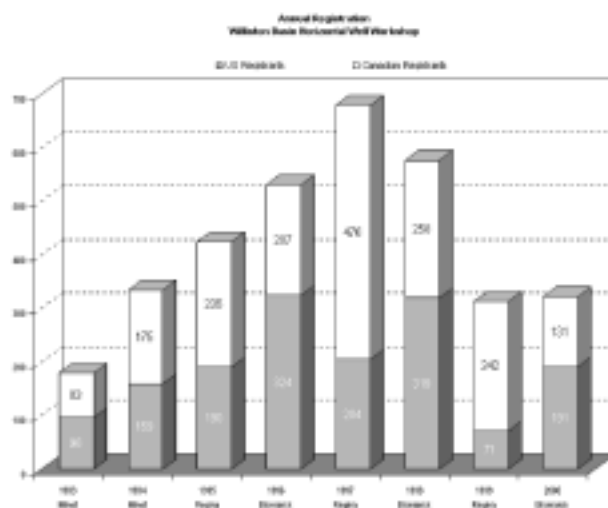


Figure 1.

States & Provinces Represented Eighth International Williston Basin Horizontal Well Workshop

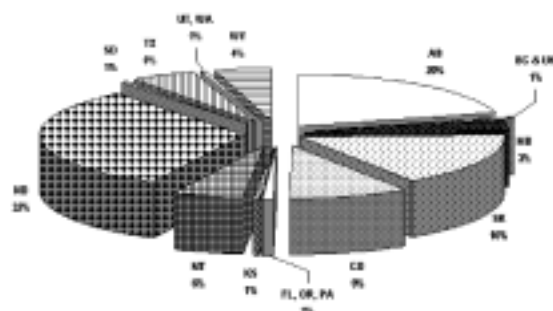


Figure 2.

More Comments on the Horizontal Workshop

by John Bluemle

All three members of the Industrial Commission of North Dakota – Governor Schafer, Attorney General Heitkamp, and Agricultural Commissioner Roger Johnson – spoke at the Horizontal Workshop. Each provided interesting and valuable comments. I have a copy of Governor Schafer's remarks and I'll summarize parts of them.

The Governor pointed out the economic impact the oil industry has on North Dakota. It is, of course, substantial and the higher prices being paid for crude oil produced have resulted in a dramatic increase in revenues to the state during the current biennium. He acknowledged the value of the NDGS/SEM Horizontal Well Workshop, particularly the cooperation it fosters between North Dakotans and Canadians. And the Governor pointed out how valuable the Workshop has been in helping to promote the use of horizontal drilling in this region.

Governor Schafer dealt mainly with the need for a national energy policy. I'll quote from one part of the text of his remarks to the Workshop participants on May 8:

"As you know, in 1998, drilling for oil virtually stopped in North Dakota and many other parts of the nation. That hurt many people, but it especially hurt you folks who believe in and work for the future of America's oil and gas industry.

The fact that our most secure source of oil – domestic production – was threatened by cheap foreign imports didn't seem to matter to anyone in Washington, D.C. But the recent price jump in gasoline across the nation warranted the announcement of a new Clinton/Gore

Administration program called: 'Taking Action to Strengthen America's Energy Security.'

Suddenly, the Administration noticed that OPEC sets the world oil price. The deliciously low consumer pump prices in 1997, 1998 and early 1999 drove the U.S. petroleum industry to its knees, yet governors of oil and gas producing states like myself could not get the attention of national policy makers.

I testified before Congress last year and urged Washington to give the same attention to domestic oil that it had given to domestic corn broom manufacturers. My plea fell on deaf ears.

Then, in a predictable move when someone controls the market, oil prices moved to a higher level....Sadly, our country was reduced to asking OPEC for a break in the name of 'alarmingly high' prices. Now that prices have retreated somewhat – and energy prices are no longer making headlines – our policy makers have wandered off to a new cause of the day.

Meanwhile, the important lessons learned from ignoring a domestic oil and natural gas policy have been lost. The fact is America is addicted to cheap foreign oil. And just as a drug addict deals with a pusher from a position of weakness, we deal with foreign producers by refusing to acknowledge our problem and to start helping ourselves."

Also in conjunction with the Horizontal Workshop, the Saskatchewan Minister of Energy and Mines, Eldon Lautermilch, was in Bismarck.

The accompanying photo was taken during a meeting of the Industrial Commission that was held on May 8. Eldon Lautermilch and Malcolm Wilson met with the Commission to discuss issues of mutual concern to North Dakota and Saskatchewan.



The photo shows (left to right) Agriculture Commissioner Roger Johnson; Malcolm Wilson, Director of the Energy Development Branch of Saskatchewan Energy and Mines; Eldon Lautermilch, Minister of Energy and Mines; Governor Edward T. Schafer; Attorney General Heidi Heitkamp; and State Geologist John P. Bluemle.