

DEG Spheres of Influence December 2018

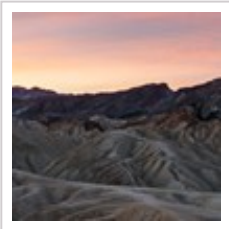
December 2018

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Industry and the Environment: News from Recent Professional Meetings

December 2018 | By Mary Barrett

One of my goals as this year's DEG president is to expand and broaden my observations on news concerning energy and the environment. While I already stay abreast with news services and readings from two organizations – AAPG and SPE – I committed myself to go to as many related meetings as possible to observe what is happening.

No, I am not spending all of your DEG dues! AAPG covered costs for only one meeting – the rest were just mine to attend and enjoy. They included URTeC (July), SPE's annual meeting (September), the GCAGS annual meeting (October), AAPG's Eastern Section annual meeting (October) and GSA's national meeting (November). I sat in on technical talks that covered the environment and sustainability. And while I was not yet DEG president at the May 2018 AAPG annual meeting, I also sat in on those sessions as well.

Sustainability and sustainable development were a very prominent part of some SPE presentations. Like AAPG, this is an important discussion item for its 2018-19 national and international meetings. My greatest takeaway from sustainable development discussions at the SPE meeting was: What are the metrics for this? To have metrics, something to measure actions and successes, is to have a plan of action.

All industry-related meetings prominently featured produced water management related to unconventional shale production. The other major topics were induced seismicity and carbon capture and sequestration – several meetings had dedicated sessions to these topics.

Other talks scattered at various industry meetings included climate change. Luncheon speaker Gregory Wrightstone spoke at URTeC (see September Explorer), and there was a climate change session at GCAGS. Most of the talks did not support any future actions to limit gasses at issue (carbon dioxide, methane), and the reasons varied (like, not recognizing any or much human impact; proposed actions would not be successful; future climate change impacts would not be as harmful as curtailing hydrocarbon energy usage, etc.).

The national GSA meeting was very diverse in subject matters. There always is a “Best of AAPG” session, but these talks were about energy development only, not industry and the environment. There was a session concerning pollution and the energy industry – I gave a talk there on the history of arsenic corrosion inhibitors and their environmental signature. Overall, these papers were not as strong and as diverse as I witnessed at some of the industry meetings (AAPG's annual meeting in Salt Lake City, for example). GSA had a few sessions on climate change science and education, and they were well attended. Generally, these talks spoke to the human impact.

What seemed lacking to me was any paper talking about future transitions – it was not due to some hostile environment (like speaking about natural gas and the future) but more that industry-related people who could



Mary Barrett

speak to this scenario were not there. This was unfortunate, as I did take the time to correct one speaker's interpretation of recent usage numbers for coal and natural gas. He simply did not have an awareness of what was going on with natural gas, and the audience was appreciative for this correction. (No, I was not mobbed ...).

Overall, it has been a mind-expanding experience, and I know it helps me to understand the importance of the DEG's role in continuing to bring these subjects forward at both meetings and in our journal.

Zabriskie Point of Death Valley

December 2018 | By Kenneth Plato



For avid landscape photographers like myself, Death Valley National Park is a must-see destination. Among the numerous geological wonders in the park are the salt flats at Badwater Basin (the lowest point in North America), the stunning sand dunes of Mesquite Flat, the multi-colored sandstone canyons at Artists Palette and the bizarre, crusted salt formations at Devil's Golf Course.

But probably the most iconic and spectacular spot in Death Valley is the view overlooking the Golden Canyon from Zabriskie Point.

The photo above shows the barren, out-of-this-world beauty of Zabriskie Point taken on my trip there in December 2016. The colorful sunrise and diffuse light provide an excellent backdrop to the finely-sculpted badlands. For a more close-up perspective take a hike on the Badlands Loop, where visitors are treated to a multitude of amazing rock formations and impressive gulches.

Death Valley National Park in California is known for its erosional scenery. As part of the Amargosa Range, Zabriskie Point stretches over eastern portion of Death Valley. It is composed of sediments from Furnace Creek Paleolake, which dried up about five million years ago – long before Death Valley came into existence. The location was named after Christian Brevoort Zabriskie, vice president and general manager of the Pacific Coast Borax Company in the early 20th century, which had its mining operations in Death Valley.

Millions of years before the actual subsidence and extension of Death Valley and the existence of Lake Manly, another lake covered a large part of Death Valley. This paleolake was formed about nine million years ago. During several million years of its history, saline muds, gravels from nearby highlands and ash falls from the then-active Black Mountain volcanic field were accumulated at the lake bottom. These interbedding sediments were developed in what is known today as the Furnace Creek Formation. The borates were concentrated in these Furnace Creek lakebeds from hot spring waters and altered rhyolite from nearby volcanic fields. The Formation, made up of over 5,000 feet (1500 m) of mudstone, siltstone and conglomerate, created one the most enigmatic landscapes in the United States.

DEG Invited Speakers and Planned Technical Sessions, ACE 2019 Meeting

December 2018 | By Gretchen Flint, Programs Communication Representative

DEG looks forward to the ACE 2019 meeting with planned technical sessions that include carbon capture and sequestration, induced seismicity and produced water management, and general environmental presentations.

The joint DEG/EMD luncheon will be held Wednesday, May 22, featuring our guest speaker Eirik Wærness, senior vice president of Macroeconomics and Market Analysis, chief economist and head of strategy in Mid- and Downstream at Equinor, one of the world's largest oil and gas companies. He has broad experience from government, academics and private sector companies in different leadership positions and as an advisor. Since 2014 he has served different energy initiatives under the World Economic Forum, including special advisor on energy architecture and as a member of the global council on the future of energy.

He also is a member of IRENA's (International Renewable Energy Agency) Global Commission to examine Geopolitics of Energy Transformation and recently was featured in Forbes Magazine and Bloomberg News.

Wærness is a dynamic and well-known speaker on topics including implications of short and long-term energy demands, scenarios of future energy transformation, the role of carbon pricing and carbon capture and storage and the growth of renewables.

On Tuesday afternoon, May 21, our DEG Special Session will feature Iain Stewart, professor of Geoscience Communication at the University of Plymouth, UK, and director of its Sustainable Earth Institute. His academic interests are in applying Earth science to pressing societal concerns – climate change, geo-resources, geo-energy, disaster risk reduction – leading to his designation as UNESCO chair in Geoscience and Society.

His geo-communication expertise builds on a 15-year partnership with BBC Science, making popular mainstream television documentaries about planet Earth and tackling geoscientific issues, such as climate change (2008's Earth: The Climate Wars), energy (in 2013's Fracking – the New Energy Rush, and Planet Oil in 2015). This "popular geoscience" has led to novel research in how to effectively convey complex and contested Earth science to non-technical (public) audiences. His talk is "Communicating Contested Geoscience to the Public: 'Matters of Fact' vs 'Matters of Concern,'" addressing how geoscientists need new communication strategies to engage dissonant publics.

See you in San Antonio for the ACE 2019 meeting!



Eirik Wærness



Iain Stewart