



AGENDA

REGIONAL INDUCED SEISMICITY COLLABORATIVE

ALL-HANDS WORKSHOP

Bureau of Economic Geology – 10100 Burnet Road – Bldg. 130, Austin TX 78758

Tuesday/Wednesday, January 15-16, 2019

MISSION: To improve sharing of data and ideas on induced seismicity across the geological surveys of states located in the southern midcontinent of the United States (e.g., Texas, Oklahoma, New Mexico, Kansas, and Arkansas), and to communicate findings to stakeholders and the public

AGENDA

Tuesday, January 15, 2019

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| 12:00 – 1:00 | Arrival and Lunch |
| 1:00 – 1:15 | Introduction, Agenda and History of RISC |
| 1:15 – 2:30 | Topic 1 – Network Ops and Optimization (convened by Alexandros Savvaidis)
<i>Panelists – Withers, Savvaidis, Walter, Litherland</i> |
| 2:30 – 3:00 | Break and Networking |
| 3:00 – 4:15 | Topic 2 – Subsurface Monitoring and Characterization (convened by Kyle Murray)
<i>Panelists – Murray, Hennings, Kopper</i> |
| 4:15 – 5:00 | General Discussion |
| 5:00 – 8:00 | Dinner and Drinks in Core Research Viewing Room – B3 |

Wednesday, January 16, 2019

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| 8:30 – 8:45 | Breakfast |
| 8:45 – 9:00 | Logistics and Recap |
| 9:00 – 10:15 | Topic 3 – Information and Decision Making (convened by Rex Buchanan)
<i>Panelists – Buchanan, Blount, Yates, Layne</i> |
| 10:15 – 10:30 | Break |
| 10:30 – 11:30 | Topic 4 – General Discussion about RISC and Future Activities (all) |
| 11:30 – 12:00 | Final Thoughts and Next Steps |
| 12:00 | Lunch and Adjourn |

Attendees at RISC All-Hands Meeting, January 15-16, 2019

Scott Ausbrooks, Arkansas Geological Survey, scott.ausbrooks@arkansas.gov
Rex Buchanan, Kansas Geological Survey, rex@kgs.ku.edu
Martha Kopper, Arkansas Geological Survey, martha.kopper@arkansas.gov
Mark Layne, Groundwater Protection Council, mlayne@gwpc.org
Mairi Litherland, New Mexico Bureau of Mines and Geology, mairi.litherland@nmt.edu
Kyle Murray, Oklahoma Geological Survey, kyle.murray@ou.edu
Paul Ogwari, Oklahoma Geological Survey, ogwaripaul@gmail.com
Aaron Velasco, Railroad Commission of Texas, aaron.velasco@rrc.texas.gov
Jake Walter, Oklahoma Geological Survey, jwalter@ou.edu
Dan Yates, Groundwater Protection Council, dyates@gwpc.org
Michael Young, Texas Bureau of Economic Geology, michael.young@beg.utexas.edu
Peter H Hennings, Texas Bureau of Economic Geology, peter.hennings@beg.utexas.edu
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Dena Miller, Texas Bureau of Economic Geology, dena.miller@beg.utexas.edu
Joe Renk, National Energy Technology Laboratory, joseph.renk@netl.doe.gov
Sean Avitt, Railroad Commission of Texas, sean.avitt@rrc.texas.gov

Summary of Meeting Notes:

The first All-Hands Workshop was held from January 15-16, 2019 in Austin, Texas. This is the first face-to-face meeting of the RISC members. Attendees were also present from the Railroad Commission of Texas, the oil and gas regulators for Texas, GWPC, and NETL. The goals of the meeting were to cross-inform each other about ongoing research into induced seismicity in our respective states, to develop collaborative research opportunities, and to identify areas where the enhanced communication could benefit the connection between data and information creation, and regulatory decision making. Members of the Collaborative also discussed ways to improve the webinar series and the potential for a state survey – regulator workshop in Oklahoma City in September at the GWPC Annual Forum.

The Workshop was organized around scientific topics, including Network Operations/Optimization, Subsurface Monitoring and Characterization, and Information and Decision Making, the latter of which discussed the importance of, and approaches for, connecting our research to the public and regulators. Sessions were moderated by RISC members and time was allotted for questions and discussions. The final session specifically dealt with improving the RISC mission and activities. Below are bulleted notes specific to follow-up tasks and other related comments about RISC and its activities. All presentations are included and available publicly.

Follow-up tasks:

- Attendees suggested two possible webinars from USGS that could dovetail with RISC. One would focus on network data operations and how this interfaces with State networks, and another on the breadth of USGS research into induced seismicity. The former could be presented by Paul Earle at USGS National Earthquake Information Center and the latter by Elizabeth Cochran at USGS Pasadena, CA.
- Attendees discussed developing a framing project on creating a regional bottom-hole pressure monitoring program, essentially a subsurface observatory, which could be used as monitoring points for studies at both local and regional scales, and control points for model calibration or validation.
- Joe Renk (NETL) discussed the NM monitoring program and the potential for support the network in southern NM using the monitoring collected for the WIPP site. Joe was going to discuss data sharing with Sandia National Laboratories
- Attendees discussed a possible regional, inter-state project TX, OK, and AR using Balcones Escarpment through Arkoma Basin.
- Maintain ongoing cooperation of networks between states (e.g., NM-TX in northern Delaware Basin and OK-TX in SW Oklahoma).

Other specific comments and suggestions from attendees:

- Dino Huang (TX) – need to better share catalogs and phase picks across different states
- Scott Ausbrooks (AR) – RISC should pursue regional understanding of the characteristics of the Arbuckle across states
- Kyle Murray (OK) – Is there a state-by-state compilation of water budgets per state? Would data from IHS (or others) on SWD, production, water sourcing be available and sharable?
- Dan Yates (GWPC) – GWPC has agreed to help generate a 1-2 page document on how states react to seismicity and will make available to RISC members
- Dan Yates (GWPC) – will help organize a meeting at the GWPC UIC conference in Dallas in February between RISC members and state regulatory representatives¹.
- Scott Ausbrooks (AR) – will pursue RISC related meeting at AASG meeting in Montana in June.

¹ At the time of this report, that meeting was held and attendees were supportive of a workshop between RISC members, regulators and communicators (GWPC/RISC/StatesFirst) during September