# Interstate Oil & Gas Compact Commission

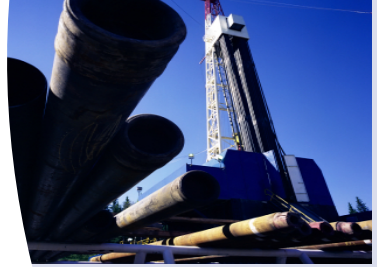
## Technical Society Exchange

**June 30, 2020**

**Energy Resources, Research & Technology Committee**

**Bey Westcott, IOGCC Regulatory Technical Liaison Intern**

INTERSTATE Oil & Gas COMPACT COMMISSION



# Agenda

- Project overview
- Status update
- 2020 topics
- Technical connections update
- ERRT content review

INTERSTATE Oil & Gas COMPACT COMMISSION

# Project Overview

**2016**

- ERRT surveyed state O&G regulators and found that to respond proactively to changing technologies and practices, regulators needed ready access to tip-of-spear information from technical societies and leading experts

**2018**

- ERRT began a process of collecting key topics of concern from regulators and sharing them with technical societies for feedback

**2019**

- ERRT launched a regulator-only portal on IOGCC's website to compile and share this information

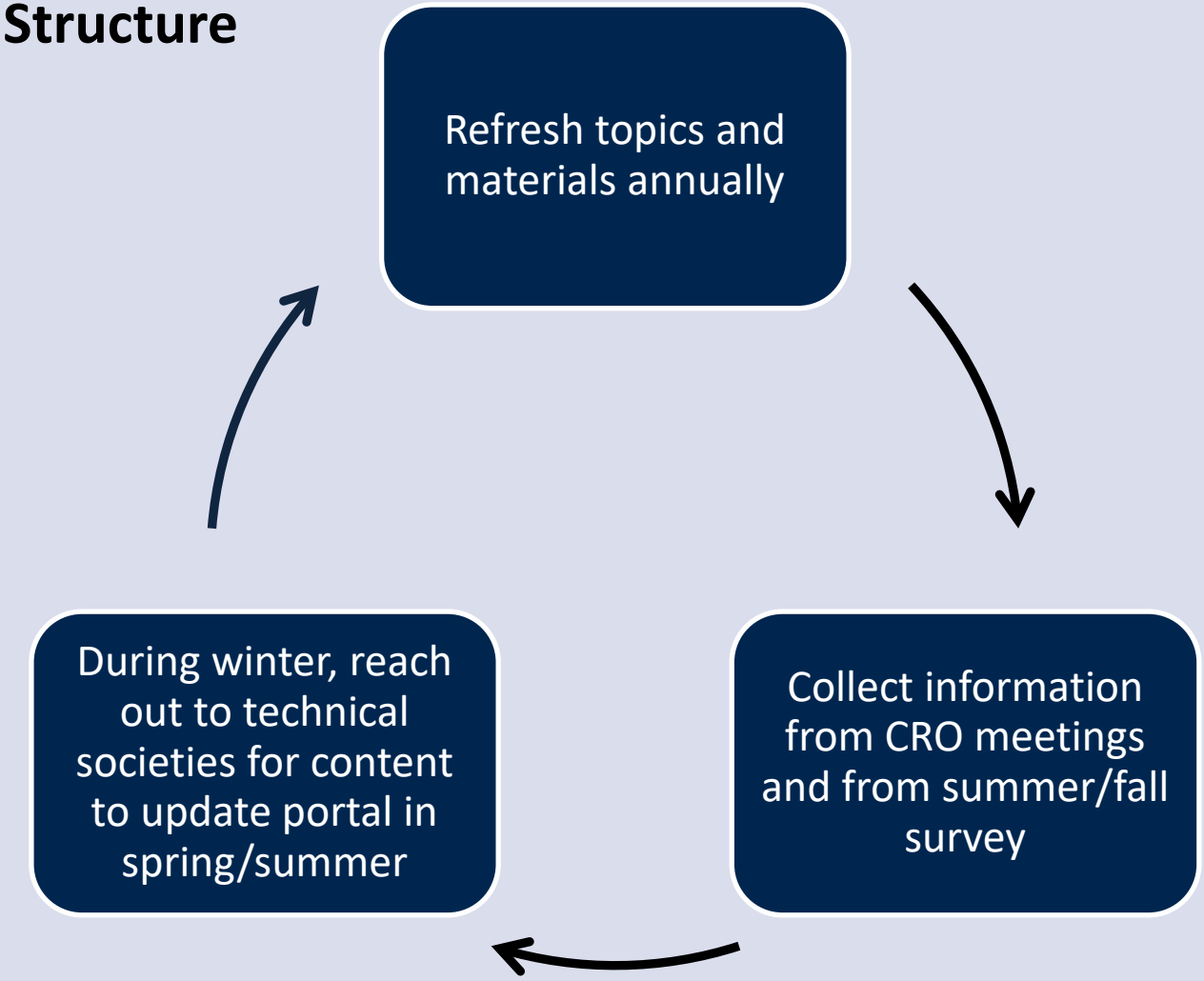
**2020**

- The regulator-only portal is continually updated with material from technical societies while 2019 material is archived, and webinars have been held with more planned

INTERSTATE Oil & Gas COMPACT COMMISSION

# Project Overview

**Process Structure**




INTERSTATE Oil & Gas COMPACT COMMISSION

# Project Overview

Portal currently contains 2020 topic material

Three main “modalities of participation” for technical societies

- Provision of papers, articles, and presentations
- Volunteering SMEs for on-call duty for regulator inquiries
- Development and presentation of webinars

Portal includes contact information for subject matter experts (SMEs)

- These SMEs are standing by to provide unbiased, non-commercial information on individual topics of concern to regulators
- SMEs available by phone and email

INTERSTATE Oil & Gas COMPACT COMMISSION

# 2020 Status

**2019 Portal**

- Portal is archived. It will still be available (and useful!), but we will not update the resources on that page

**2020 Portal**

- Portal is live and continuously updated. Overlapping topics from 2019 were carried over, along with new information from technical societies as well as works from elsewhere in IOGCC

INTERSTATE Oil & Gas COMPACT COMMISSION

# 2020 Topics

- **Methane / Flaring**
  - methane monitoring and flaring reduction technologies and strategies
- **Plugging / Cementing**
  - new cost-effective mechanisms and plugging wells with uncemented casing
- **Induced seismicity**
  - from zipper fracs or UIC
- **Produced water**
  - spill management and reuse inside oilfield

INTERSTATE Oil & Gas COMPACT COMMISSION

# 2020 Technical Connections

- Society of Petroleum Engineers
- Society of Exploration Geophysicists
- American Association of Petroleum Geologists
- American Petroleum Institute
- Department of Energy
- American Association of Drilling Engineers

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

| Topic | Articles | Conferences | Papers | Videos | SMEs |
|---|---|---|---|---|---|
| Methane/ Flaring | 10 | 4 | 14 | 4 | 7 |
| Plugging/ Cementing | 7 | 3 | 14 | 1 | 2 |
| Induced Seismicity | 8 | 1 | 14 | 2 | 6 |
| Produced Water | 10 | 2 | 22 | 1 | 6 |
| **Totals** | **35** | **10** | **64** | **8** | ***13** |

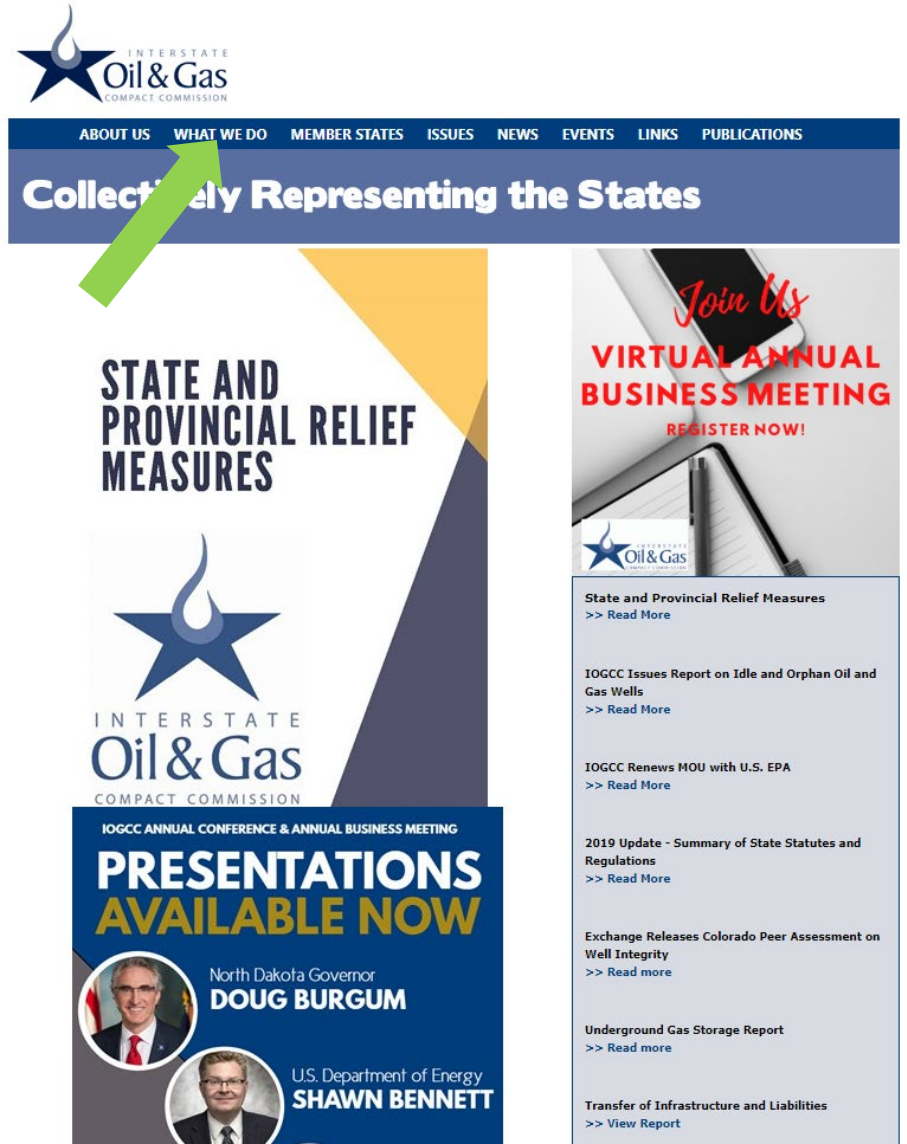
Each topic portal contains content from technical societies including AAPG, AADE, and SPE

* Some SMEs cover multiple topics so total is not sum of parts

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

IOGCC Home Page




INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

What We Do

INTERSTATE Oil & Gas COMPACT COMMISSION

ABOUT US | WHAT WE DO | MEMBER STATES | ISSUES | NEWS | EVENTS | LINKS | PUBLICATIONS

## What We Do

Committees and Workgroups | Training Programs | Award Programs | Current Projects |

### What We Do

The Interstate Oil and Gas Compact Commission assists member states in establishing effective regulatory practices to conserve and efficiently recover oil and natural gas resources while protecting health, safety and the environment.

The Commission serves as the collective voice of member governors on oil and gas issues and advocates states' rights to govern petroleum resources within their borders.

The Commission's various committees and workgroups initiate and sustain innovative projects with the sole purpose of advancing our nation's energy future. Comprised of member governors, state oil and gas regulators, industry and the environmental community, these committees work diligently to resolve issues surrounding the much-needed resources found in the United States.

The Interstate Oil and Gas Compact Commission is the nation's only dedicated forum for governors, state appointees and key policy staff focusing on key oil and natural gas issues. Through the Commission, member states are able to:

- Access resources nationwide for more effective practices, as well as lessons learned from other states grappling with similar issues;
- Receive inclusive information about what is stirring in other states and in Congress;
- Obtain assistance to initiate innovative programs or further develop and enhance current programs;
- Learn about emerging national trends.

#### Identify and Share Best Practices

The Commission tracks, evaluates and disseminates information on state innovations and best practices by:

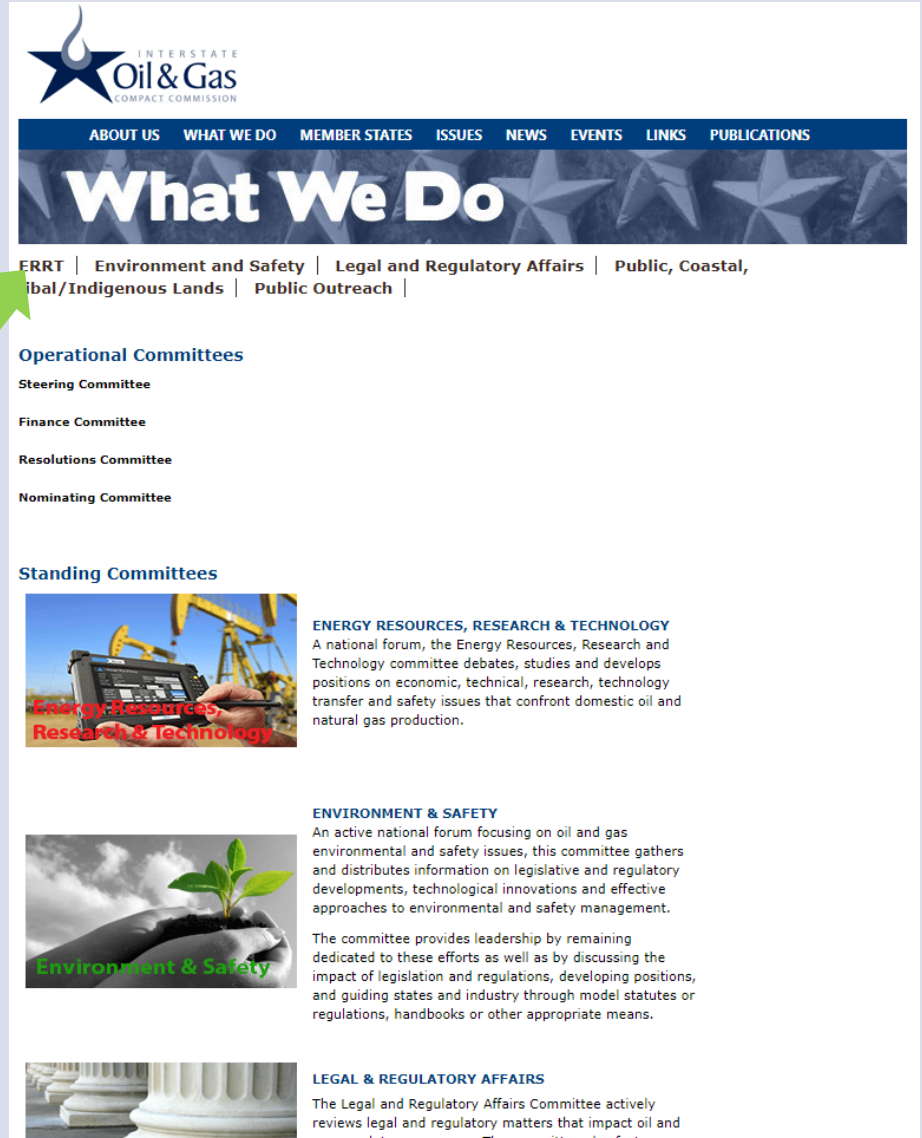
- **Surveying States** on key issues and providing assessments of current activities for individual states;
- **Cataloging Innovative Programs** and sharing this information via reports, briefs, and a variety of online and printed materials; and
- **Hosting Biannual Meetings** to allow the exchange of information between governors, state oil and gas regulators, industry and the environmental community.

HOME | SITE MAP | SEARCH | LINKS | CONTACT US

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

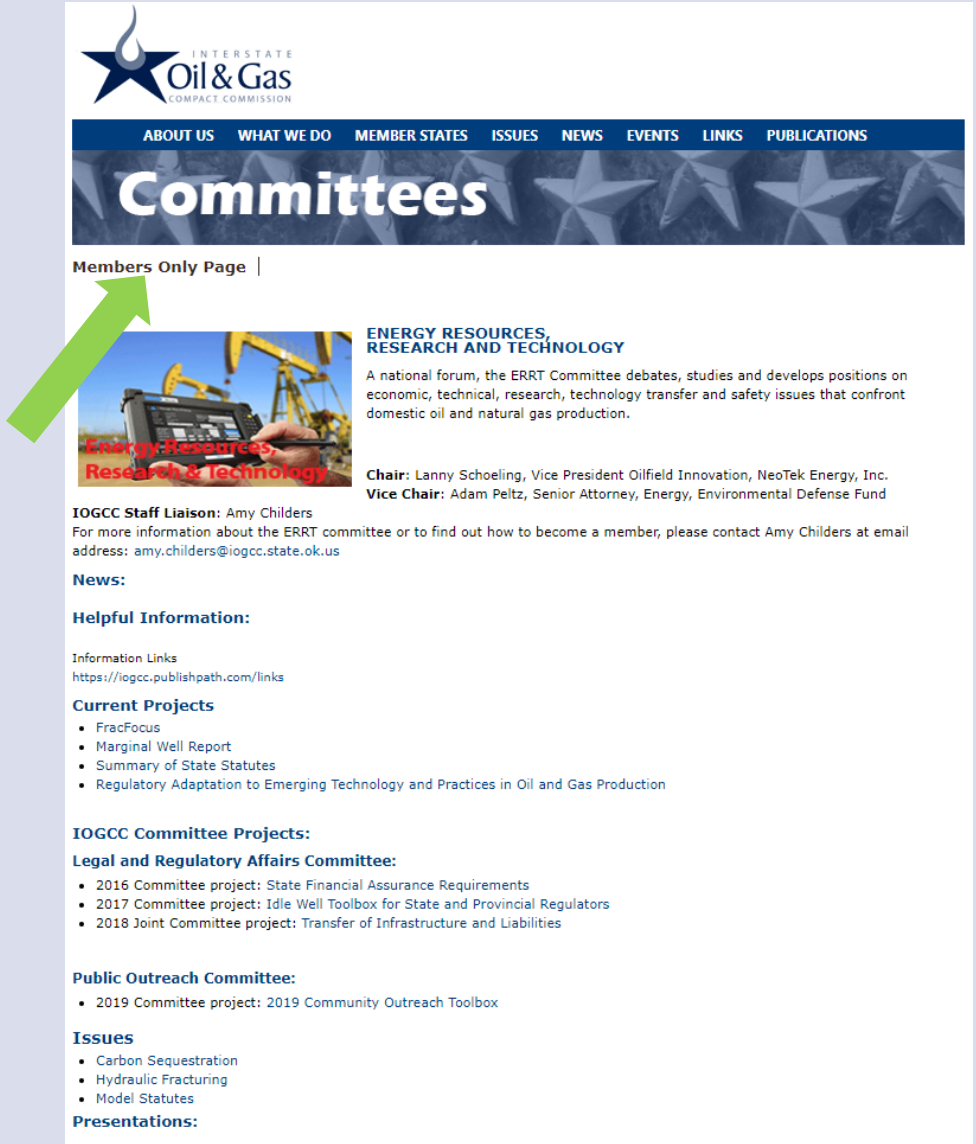
Committees and Workgroups




INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

ERRT Page



INTERSTATE Oil & Gas COMPACT COMMISSION

ABOUT US | WHAT WE DO | MEMBER STATES | ISSUES | NEWS | EVENTS | LINKS | PUBLICATIONS

## Committees

**Members Only Page** |



**ENERGY RESOURCES, RESEARCH AND TECHNOLOGY**

A national forum, the ERRT Committee debates, studies and develops positions on economic, technical, research, technology transfer and safety issues that confront domestic oil and natural gas production.

**Chair:** Lanny Schoeling, Vice President Oilfield Innovation, NeoTek Energy, Inc.
**Vice Chair:** Adam Peltz, Senior Attorney, Energy, Environmental Defense Fund

**IOGCC Staff Liaison:** Amy Childers
For more information about the ERRT committee or to find out how to become a member, please contact Amy Childers at email address: amy.childers@iogcc.state.ok.us

**News:**

**Helpful Information:**

Information Links
https://iogcc.publishpath.com/links

**Current Projects**

- FracFocus
- Marginal Well Report
- Summary of State Statutes
- Regulatory Adaptation to Emerging Technology and Practices in Oil and Gas Production

**IOGCC Committee Projects:**

**Legal and Regulatory Affairs Committee:**

- 2016 Committee project: State Financial Assurance Requirements
- 2017 Committee project: Idle Well Toolbox for State and Provincial Regulators
- 2018 Joint Committee project: Transfer of Infrastructure and Liabilities

**Public Outreach Committee:**

- 2019 Committee project: 2019 Community Outreach Toolbox

**Issues**

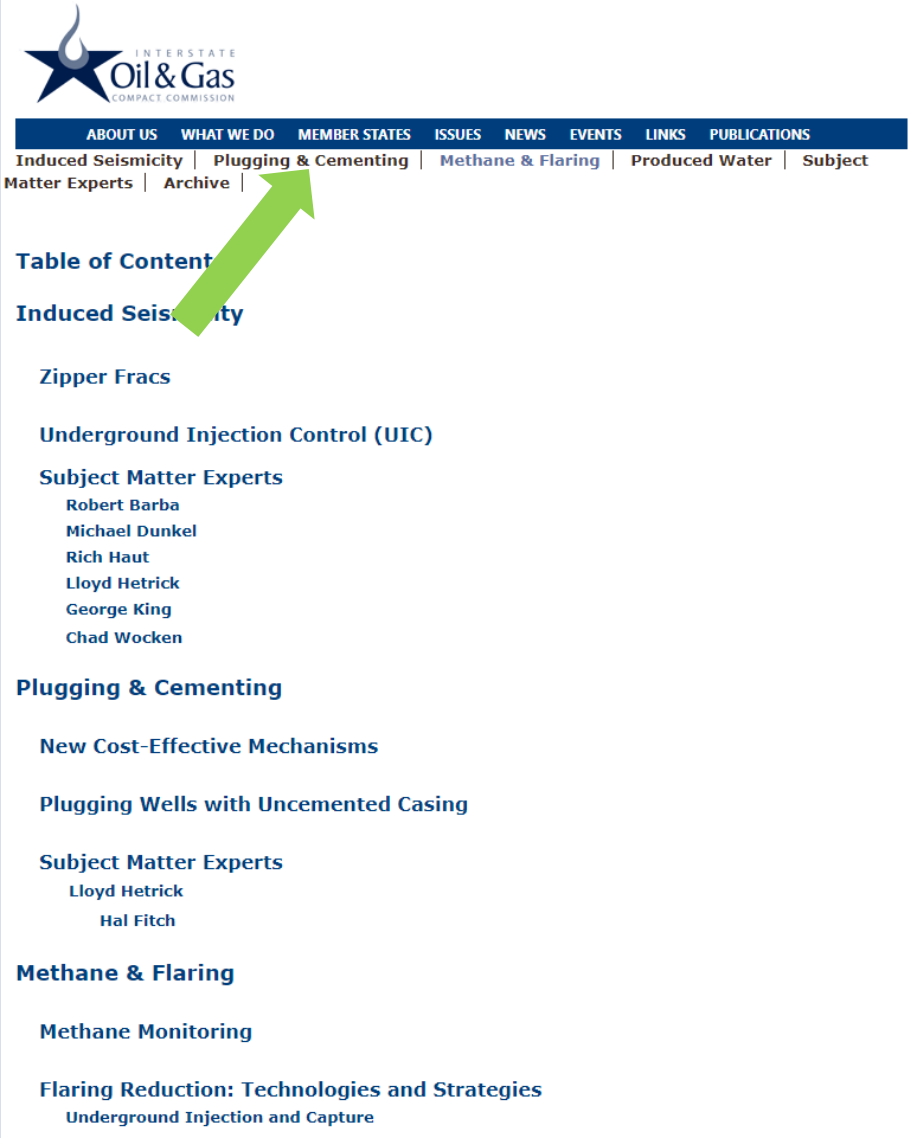
- Carbon Sequestration
- Hydraulic Fracturing
- Model Statutes

**Presentations:**

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

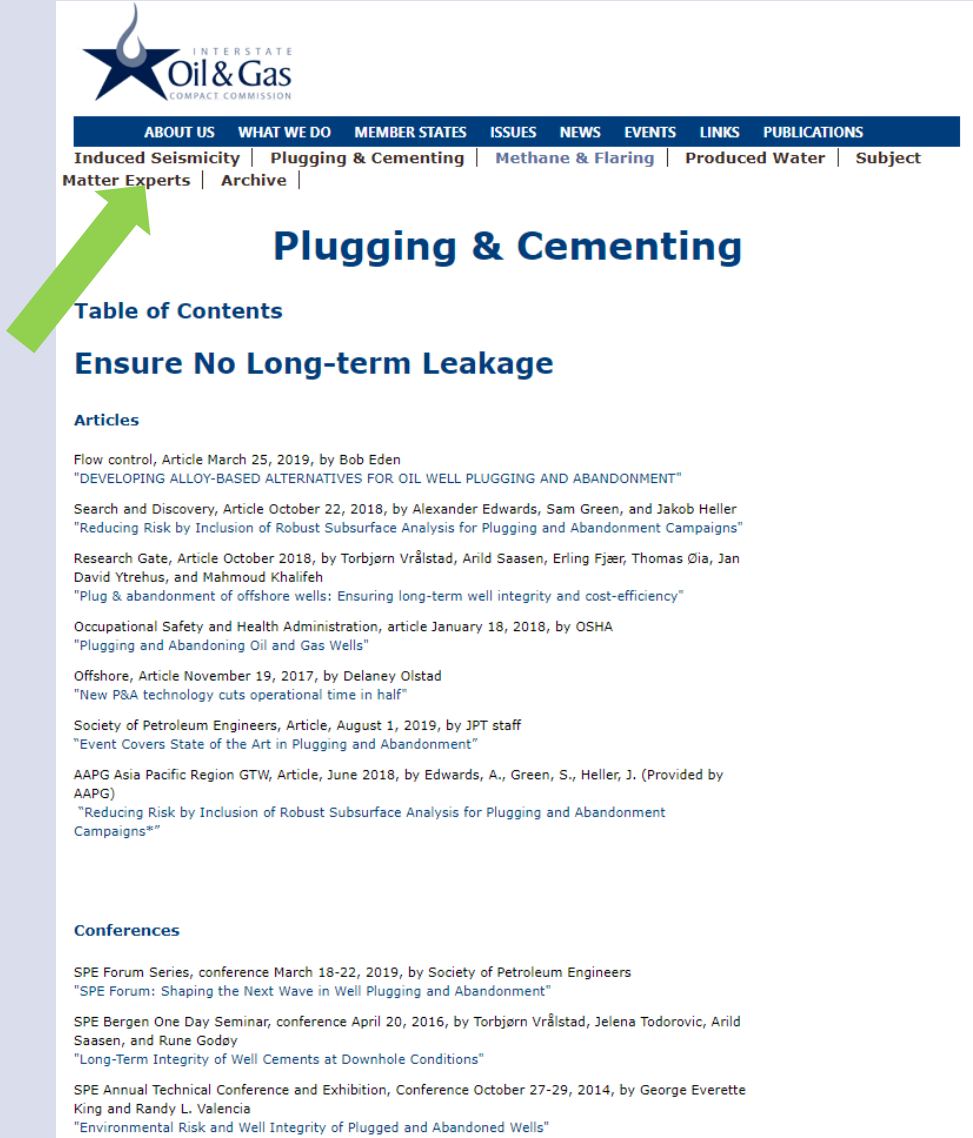
Members Only Portal




INTERSTATE
Oil & Gas
COMPACT COMMISSION

# ERRT Portal

Topic Page



INTERSTATE Oil & Gas COMPACT COMMISSION

ABOUT US | WHAT WE DO | MEMBER STATES | ISSUES | NEWS | EVENTS | LINKS | PUBLICATIONS

Induced Seismicity | Plugging & Cementing | Methane & Flaring | Produced Water | Subject Matter Experts | Archive |

## Plugging & Cementing

### Table of Contents

### Ensure No Long-term Leakage

#### Articles

Flow control, Article March 25, 2019, by Bob Eden
"DEVELOPING ALLOY-BASED ALTERNATIVES FOR OIL WELL PLUGGING AND ABANDONMENT"

Search and Discovery, Article October 22, 2018, by Alexander Edwards, Sam Green, and Jakob Heller
"Reducing Risk by Inclusion of Robust Subsurface Analysis for Plugging and Abandonment Campaigns"

Research Gate, Article October 2018, by Torbjørn Vrålstad, Arild Saasen, Erling Fjær, Thomas Øia, Jan David Ytrehus, and Mahmoud Khalifeh
"Plug & abandonment of offshore wells: Ensuring long-term well integrity and cost-efficiency"

Occupational Safety and Health Administration, article January 18, 2018, by OSHA
"Plugging and Abandoning Oil and Gas Wells"

Offshore, Article November 19, 2017, by Delaney Olstad
"New P&A technology cuts operational time in half"

Society of Petroleum Engineers, Article, August 1, 2019, by JPT staff
"Event Covers State of the Art in Plugging and Abandonment"

AAPG Asia Pacific Region GTW, Article, June 2018, by Edwards, A., Green, S., Heller, J. (Provided by AAPG)
"Reducing Risk by Inclusion of Robust Subsurface Analysis for Plugging and Abandonment Campaigns*"

#### Conferences

SPE Forum Series, conference March 18-22, 2019, by Society of Petroleum Engineers
"SPE Forum: Shaping the Next Wave in Well Plugging and Abandonment"

SPE Bergen One Day Seminar, conference April 20, 2016, by Torbjørn Vrålstad, Jelena Todorovic, Arild Saasen, and Rune Godøy
"Long-Term Integrity of Well Cements at Downhole Conditions"

SPE Annual Technical Conference and Exhibition, Conference October 27-29, 2014, by George Everette King and Randy L. Valencia
"Environmental Risk and Well Integrity of Plugged and Abandoned Wells"

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

SME List

INTERSTATE Oil & Gas COMPACT COMMISSION

ABOUT US | WHAT WE DO | MEMBER STATES | ISSUES | NEWS | EVENTS | LINKS | PUBLICATIONS

Induced Seismicity | Plugging & Cementing | Methane & Flaring | Produced Water | Subject Matter Experts | Archive |

## Subject Matter Experts

Table of Contents

## Induced Seismicity

**Robert Barba**

Petrophysicist
Integrated Energy Services, Inc.
rbarba75@gmail.com
(713) 823-8602
Expertise: Petrophysics and Hydraulic Fracturing

**Michael Dunkel**

Global Technology Leader for Upstream Water
Advisian, Worley Group
Michael.Dunkel@Advisian.com or Dunkelmrd@gmail.com
(469) 585-6468
Expertise: Water Management for Oil and Gas, Regulations, Methane Emissions and Well Operations

**Rich Haut**

President
HEST, LLC
haut@HESTLLC.com
(281) 787-8768
Expertise: Air and Methane Emissions - Well Operations

**Lloyd Hetrick**

Operations Engineering Advisor
East Shore Investments, LLC
lloyd.hetrick@eastshoreinv.com and lloyd.h.hetrick@gmail.com
(281) 630-6571
Expertise: Well Integrity, Well Operations, Plugging, Orphan Well Management, and Produced Water Management

**George E. King, P.E.**

GEK Engineering PLLC
gkingengineering@gmail.com
(281) 851-8095

**Chad Wocken**

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

2019 Archive

INTERSTATE Oil & Gas COMPACT COMMISSION

ABOUT US | WHAT WE DO | MEMBER STATES | ISSUES | NEWS | EVENTS | LINKS | PUBLICATIONS

Air | Well Operations | Orphan Wells | Plugging | Produced Water |

## Orphan Wells

### Identifying & Plugging Orphan Wells

#### Articles

Report on Idle/Orphan Wells, Presentation, August 26, 2019, by Hal Fitch
Idle and Orphan Oil and Gas Wells Regulatory Solutions Preliminary Results

Houston Harbaugh, Article 2019, by Robert J. Burnett
"Abandoned Oil and Gas Wells - More Than Just a Rusty Eyesore"

PennState Extension, Article October 23, 2018, by Seth Pelepko and Luke Plants
"Addressing Orphan and Abandoned Wells from a Regulatory and Industry Perspective"

Michigan Journal of Environmental & Administrative Law, Article 2018, by Bret Wells and Tracy Hester
"Abandoned but Not Forgotten: Improperly Plugged and Orphaned Wells May Pose Serious Concerns for Shale Development"

AAPG Datapages, Article 2018, by Richard Hammack, Garret Veloski, and James Sams
"Using Drone Magnetic and LiDAR Surveys to Locate Unmarked, Abandoned Wells Prior to Unconventional Oil and Gas Development"

The Denver Channel, Article July 18, 2018, by Blair Miller
"Hickenlooper's executive order aims to eliminate Colorado's orphaned oil and gas wells"

Occupational Safety and Health Administration, article January 18, 2018, by OSHA
"Plugging and Abandoning Oil and Gas Wells"

Offshore, Article November 19, 2017, by Delaney Olstad
"New P&A technology cuts operational time in half"

AAPG Datapages, Article June 2017, by James I. Sams III, Garret A. Veloski, J. Rodney Diehi and Richard W. Hammack
"Methods and challenges to locating legacy wells in western Pennsylvania: Case study at Hillman State Park"

SEG Library, Article April 1995, by Lawrence J. Baer, Bob Overfelt, and Ted Faile
"Total Field Magnetic Surveys to Locate Abandoned Wells: Three Case Histories"

#### Conferences

SPE Annual Technical Conference and Exhibition, Conference October 27-29, 2014, by George Everette King and Randy L. Valencia
"Environmental Risk and Well Integrity of Plugged and Abandoned Wells"

SPE Western Regional & AAPG Pacific Section Meeting, Conference April 19-25, 2013, by Bruce H. Hesson
"California Department of Conservation's Division of Oil, Gas, And Geothermal Resources: Orphan Well

INTERSTATE Oil & Gas COMPACT COMMISSION

# ERRT Portal

- Initial website tracking underway
- Regulators already using members-only portal
- Two topics in top 20 most visited pages on site
  - Induced Seismicity & Plugging/Cementing
  - Around 75 monthly views per page

INTERSTATE Oil & Gas COMPACT COMMISSION

# 2020 Webinars

Technical societies and other entities help deliver information virtually via webinars:

**Produced water management inside the oilfield**

- Presented May 28th
- 76 attendees

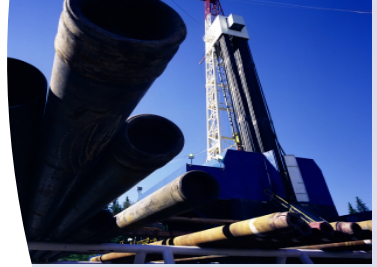
**Methane emission reduction technology and practice**

- Targeting August/September

**Induced Seismicity and Earthquake monitoring**

- Targeting later this Fall

INTERSTATE Oil & Gas COMPACT COMMISSION



# Contact Information

**Interstate Oil and Gas Compact Commission**

**Staff Liaisons:** Amy Childers & Bey Westcott
**Headquarters Address:** 900 NE 23rd Street
Oklahoma City, OK 73105
**Phone:** 405-522-8384
**Email:** amy.childers@iogcc.state.ok.us
bey.westcott@iogcc.state.ok.us

Chair: Lanny Schoeling, lschoeling73@gmail.com
Vice Chair: Adam Peltz, apeltz@edf.org

INTERSTATE
Oil & Gas
COMPACT COMMISSION