



MINUTES
Enhanced Oil Recovery Commission
Public and Executive Sessions
3rd Quarter Meeting
Monday, August 28, 2023 – 1-4pm MT
EORI Conference Room, 2435 King Blvd, Casper

1. Call to Order

Chairman Hendricks

- Roll Call / Quorum

At EORI: Commissioner Dave True, Tom Kropatsch - Wyoming Oil and Gas Conservation Commission (WOGCC) Supervisor, Commissioner Robert King, Chairman Ken Hendricks, Director Lon Whitman - Enhanced Oil Recovery Institute (EORI), Roger Hillibush - EORI, Gabe Tullis - EORI, Scott Ellingson - Zion Energy LLC, Stephen Whitaker – EORI, Shuiquan Li - EORI, and Eric Eastman (Attorney General's Office)

Remote: Commissioner Eli Bebout, Representative Don Burkhart Jr., Commissioner Erin Campbell, Commissioner Chad Brister, Executive Director Rob Creager - Wyoming Energy Authority (WEA), Connor Rothfuss - University of Wyoming Library Sciences, Kellie Cairns Vlastos – EORI, and Brian Jeffries - EORI.

2. Approval of Minutes

Chairman Hendricks

- June 28, 2023, EORC Meeting

3. EORC Chair Position – Succession

Chairman Hendricks

Chairman Hendricks mentions Director Whitman has reached out to Commissioner Chad Brister to serve as Vice Chairman and Commissioner King to serve as Chairman. Chairman Brister appreciates the opportunity to serve the Enhanced Oil Recovery Commission (EORC) but is hesitant because of his lack of presence in Wyoming and the distance could be problematic. Commissioner Brister would be happy to serve and asks the Commission if they have any concerns about him not residing in Wyoming. The Commission made it clear that they all support Commissioner Brister as Vice Chairman without hesitation and welcome him into the Vice Chairman role. This will be effective with the upcoming change with Commissioner King taking on the Chairman role to succeed Commission Hendricks.

Commissioner Bebout recognizes the difficult times EORI has been through recently with personnel problems. Commissioner Bebout appreciates the Chairman staying abreast with the issues both administratively and personally. Commissioner Bebout praises Chairman Hendricks for his admirable service.

The change will be effective at the next scheduled EORC meeting in November 2023.



4. Directors Report

Director Whitman

DIRECTOR'S FOCUS

Director Whitman mentions technical project presentations will be at the end of today's public meeting section.

- **EORI Mission, Team Unity and Collaborative Work**
 - September 15th: Team outing to Alcova for Fremont Canyon geology field trip and BBQ in town (3 spaces available for Commissioners on the field trip and all Commissioners are welcome for the BBQ)
 - 1:00 pm September 15th at Alcova Marina; BBQ at 7pm
 - September 28th: Team Volunteering at Food Bank of Wyoming organized by Eric Robertson. The team is expected to spend a couple of hours with the Food Bank which the staff is happy to move forward to foster unity and collaboration and community outreach.
- **Hiring** options/plans moving forward include hiring a Geo-Tech, Office Assistant and Sr. Geologist

Director Whitman emphasizes the importance of hiring the right people who fit into EORI Team environment is crucial. EORI's current working contractors include Jimmy Goolsby, Randi Martinsen focused on the Shannon and developing Denbury CO₂ EOR flood at Hartzog Draw.

Scott Ellingson, formerly with Merit, now runs his own company, Zion Energy LLC. Mr. Ellingson is working on the Minnelusa and will provide a presentation at the end of the public meeting.
- **RFP** process developed for all Cost Share/Pilot projects.
 - A new tab for RFP's was included on our website.

We are preparing to announce two Request for Proposals. Our new website has a page for RFP announcements and information to submit. Funding for the RFPs comes from the \$2.1M reallocated fund.
- **Industry Project Development** with:
 - Contango - Kitty Field and new well and core work
 - Jade Owls - Rozet, Ute, Fiddler Creek – Company from Houston referred by Commissioner True to discuss a polymer flood at Rozet field. Perhaps it will be one of the first RFP proposals with interest in polymer flooding.
 - Ballard - Miscible Gas Injection project
 - Scout E&P (Dallas) – own Rangely and Raven Ridge Pipeline
 - Developing MVR for “storage” at Rangely



FINANCIAL REPORTS – OVERVIEW

- No issues to report. (See July 2023 Financial reports prepared by Gabe Tullis.)
- EORI Financials remain in agreement with UW Accounting numbers.

IT DATA TECHNOLOGY HIGHLIGHTS

Roger Hillibush and his team do valuable work behind the scenes for EORI by supporting our projects with the best data we can use.

Roger Hillibush mentioned his team which is comprised of Kellie Cairns Vlastos, Research Scientist and GIS Manager for EORI. Vandy Jones, geologist and data analyst and Shane Singleton, data architect and my database manager.

▪ EORI Website

- The new EORI website was officially launched ahead of schedule on May 7th

▪ Casper Log Library

- Continued processing and integration of data (+250,000 documents) from the Casper Log Library into the EORI database.

▪ CO₂ Initiative and Pipeline Service at EORI

- The migration and integration activities of the pipeline infrastructure data, GIS technology and web applications to new updated EORI systems is nearly completed.

▪ GIS and Web Applications on the EORI Website

- Continued ongoing development and improvement of the Wyoming Reservoir Information Tool (WYRIT)

TECHNICAL PROJECT HIGHLIGHTS

▪ Developing RFPs for Polymer Pilots (Minnelusa and Muddy)

- Cost-share projects funded from the \$2.1MM reverted funds.

▪ WY Gas Injection Initiative: Gas Foam EOR Pilot Projects with COIFPM (Dr. Piri)

- \$25MM state funded (1:1 \$\$ match required/\$6.3MM cost share for participation)
 - A second \$25MM request for the project to potentially be included in UW Supplemental Budget Request

Many questions arose inquiring about why it was funded at \$25M while other documents show \$22M. In a meeting Dr. Piri explains the \$3M difference covers cost overruns.



Companies potentially interested in the RFP include True Oil, Principal Petroleum, and Sunshine Valley Petroleum. Proposals are due the 29th, with a notification of selected projects November 30th.

- I attended the July 10th Joint Appropriations Committee hearing where Dr. Piri presented an update on the project.
- I have met and discussed details of the Initiative with 3 operators:
 - True, Principal Petroleum, Sunshine Valley Petroleum
- Proposals due September 29th.
 - I will be part of the proposal review committee.
- The selected applicant(s) will be notified by Thursday, November 30, 2023
- **Cost-Share Pilot for a Microbial EOR (MEOR) – Eric Robertson**
 - Amplify Energy at Lost Soldier/Wertz
 - Waiting on final Agreement for Services document being finalized with UW General Council
 - Project start date will be hinge on completion and approval of paperwork.
 - Ongoing discussions for a project with MidCon at Culp Draw (Shannon)

Amplify doesn't want the project to start in deep winter and will delay it till Spring 2024. An approved document is expected from the University prior to Spring 2024. This project will serve as a template that can be used on all cost-share projects.

- **Denbury**
 - **Hartzog Draw** – Lon Whitman, Randi Martinsen
 - Plans are advancing for a 6-well pilot CO₂ EOR project (anticipated start date for the project in the 1st Quarter 2024)
 - A Shannon geology field trip for Denbury is scheduled for September (Randi Martinsen with Steve Whitaker)

Steve Whitaker and Randi Martinsen worked together on a pre-field trip to visit Shannon outcrops in preparation for the Denbury field trip. Director Whitman would like to have Randi Martinsen present her overview of Hartzog Draw during the next Commission meeting.

- **Using Severance Taxes to Level the 45Q Playing Field: WY CO₂ EOR Field Study and Full-State CO₂ Upside** – Lon Whitman, Eric Robertson, Shane Singleton
 - Anticipating additional work with Joint Minerals Subcommittee and the LSO to develop draft bill for the 2024 Legislative session.



- **Developing CO₂-EOR and Associated Storage Within the Residual Oil Zone Fairways of the Powder River Basin, Wyoming (DOE)** – Eric Robertson
 - Department of Energy (DOE)
 - “Re-opening” the project after lengthy delays (new operator, drilling permit)
 - Preparing a No Cost Time Extension until December to move into Budget Period 2 in January 2024
 - Contango is waiting on approval of drilling permit and anticipates drilling in September (this year)

The residual oil zone study (ROZ) for CO₂ storage will be highlighted at the Pittsburg DOE meeting this week by EORI’s Eric Robertson and Director Whitman will attend the presentation. EORI is anticipating a federal drilling permit approval soon, however there is no permit yet. Contango is ready to drill when the permit is approved.

- **Unlocking the Tight Oil Reservoirs of the Powder River Basin, Wyoming (DOE)** – Eric Robertson
 - Project is on schedule and no current budget issues. Completion scheduled in 2024.
 - DOE proposed a No Cost Time Extension until October and will then move into Budget Period 2 in November.

The DOE \$13M tight oil reservoir projects are progressing smoothly moving into the last budget period. The DOE asked for a delay until January 1, 2024. The project is on schedule and should provide important information.

- **Alpha Field – 3D seismic for Field Development (Principal Petroleum)** – Stephen Whitaker
 - Will be highlighted on September 12th **EOR Insights** with Scott Ellingson and John Frederick

Scott Ellingson and Shuiquan Li will present their report to the EORC later today.

- **Wyoming Trails Carbon Hub – (WyoTCH) CO₂ Pipeline Feed Study (DOE)** – Eric Robertson
 - \$3 Million Award
 - Carbon Solutions, EORI/UW
 - Waiting for DOE to complete paperwork and officially start the project.

The Wyoming Trails Carbon Hub DOE-funded FEED study with Eric Robertson as a PI along with Carbon Solutions. The WyoTCH is a \$3M award and we are waiting on DOE final paperwork and once approved the project will launch.



ENGAGEMENT

- EORI set up a booth sponsoring the PAW Rocky Mountain Petroleum Conference Aug 23-25 in Laramie

Our booth received a lot of attention and was well received. EORI appreciates Pete Obermueller giving us the opportunity to sponsor the Chairman's Dinner.

- **E O R Insights**

- The next **EOR Insights** will be held on September 12th with Scott Ellingson (PG) and John Frederick (Red Leaf 3D Seismic) presenting on the evolving work and discoveries at Alpha Field (Minnelusa)

- A “Virtual” event will be held on October 4th at 2pm to introduce Brian Jeffries in his new role as Commercial Pipeline Advisor at EORI. Information forthcoming.

Brian Jeffries has been active with EORI and will be attending today's executive session and will brief the Commission on the work he's been focusing on. A virtual event has been planned to introduce Mr. Jeffries on October 4th at 2:00 pm. Brian's role as the pipeline commercial advisor for EORI under the Wyoming CO₂ initiative from the Governor's office will be outlined during that time.

- I will be a speaker/panelist at the PCOR Annual Meeting September 26-27 in Grand Forks, ND
 - “Leveling the 45Q Playing Field”

Director Whitman has been asked to be a speaker regarding the leveling of the 45Q playing field for the P-Corp annual meeting in Grand Forks, North Dakota, September 26th and 27th. Director Whitman emphasized this is a great opportunity to propose a vision for 45Q for Wyoming.

- Updating and reformatting the **Alcova Geology Field Book** after numerous requests for copies and it will also be included for download on our website under Publications.

Based on popular demand, we've updated the field book, Geology of Alcova Lake. The guidebook is available for download on our website in 8.5x11” format and some will be available on waterproof paper for use while on the lake.

Commissioner True wraps back around and asks about North Dakota hosting the PCOR meeting and if North Dakota is ahead of Wyoming regarding leveling the playing field for 45Q. Director Whitman reassures Commissioner True that Wyoming is leading the way for with leveling the 45Q playing field and thus the reason he's been asked to join the panel.

5. Questions on the Financial Report

Gabe Tullis

There are no issues with the financial reports, as you noticed. We're in very good shape.



6. Questions on the IT Data Technology Report

Roger Hillibush

Deeper Dive:

Tour of the new EORI Website

EORI Data Highlights

Director Whitman introduced Roger Hillibush to present EORI's new website and Data Highlights.

Mr. Hillibush provides a summary of supporting projects focusing on the best data EORI can use. Roger Hillibush introduced his staff and their responsibilities. He then covered a tour of the EORI website and the Casper Log Library for Data Highlights.

Mr. Hillibush requests Commissioners refer to his presentation for details.

While Phase 2 of the new website redesign is being discussed, Director Whitman interjected that the Wyoming Pipeline Authority's subscriber portal has been kept active since it was transferred to EORI in 2020. This was part of keeping the Wyoming Pipeline Authority data current, updated, and secure, and active as well as managing those subscribers that were actively using it since 2020 and before.

Director Whitman mentions EORI's email addresses present some challenges because required staff don't have wyo.gov emails. This is problematic because working with the State Budget Office budget sites requires a wyo.gov email address. EORI has been trying for a year to get a wyo.gov email address for Director Whitman to use and access the information.

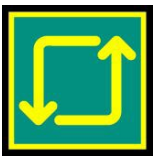
Roger Hillibush then presented the Data Overview highlighting the Casper Log Library project.

Commissioner King asks for advice if somebody has similar data and information they've acquired throughout their career and asks us, "What do I do with this?" and "How do they go about making that contact with you folks to see if you want it?" Roger Hillibush advises that he would be the point of contact and his contact information can be found on the EORI website. Staff would then look for any duplication and analyze what information is present and what is not.

Roger Hillibush segways into a presentation by Conner Rothfuss from the UW Library Science and Digital Collections.

Roger Hillibush then addressed Tom Kropatsch and explained how the Casper Log Library project could address the challenges the WOGCC faces with historic handwritten data and documents and proposes a collaboration project to digitize archival data.

Director Whitman suggests to Commissioner Campbell that this data might be useful and of interest to the State Geology office. Director Whitman feels this data would be supportive and ensure the data is available and needed once it is refined. This project helps EORI build bridges with UW and proves its value and relevance to SER and other departments.



Director Whitman interjects that Wyoming Oil and Gas Supervisor Tom Kropatsch is present as well as the WEA's Executive Director Robert Creager on Zoom.

Commissioner True asks Roger Hillibush how we can prevent a researcher from changing valid data with errant data and then republishing that? Roger Hillibush responds that data centralization is key to avoiding the siloing effect and that the data will be accessed via URI address.

Commissioner Campbell followed up on the data correction issue and appreciated the effort involved. WOGCC has been involved and measures are being taken to ensure corrections are made and that only one data resource is utilized by all stakeholders.

Roger Hillibush reassures Commissioner Campbell that we have already shared some of that information and corrections are being accepted by Nicole Coleman of the WOGCC. These corrections not only benefit EORI but the WOGCC, WSGS and the state. We would like to establish a working group to allow full participation from other stakeholders and agree on a common format.

7. Technical Projects Report Overview

Director Whitman

Deeper Dive:

Alpha Field - Geology and Modeling

Scott Ellingson, Shuiquan Li, Steve Whitaker

Director Whitman introduces Scott Ellingson and his presentation on Alpha Field and the Minnelusa owned by Principle Petroleum in Dallas. Principle approached EORI about collaborative work with 3D seismic and a cost-share agreement was developed. Mr. Ellingson was the geologist for EORI looking at this project with Principle Petroleum and found some amazing things through this 3D seismic shoot.

EORI pursues projects where operators can benefit from in their fields. Principle Petroleum provided a cost per barrel for this 3D seismic at ~ \$1 per barrel. Scott Ellingson and EORI's Shuiquan Li presented their results.

Director Whitman states this type of work exemplifies some of the projects we do here. It's proven to be beneficial for an operator or a field the size of the Alpha while adding to our regional studies.

Commissioner Bebout requests that if the wells are drilled, why has the Minnelusa success rate has been poor and is interested to see the results.

Shuiquan Li presents the modeling simulations of Alpha field. See presentation.

8. Next EORC Meeting November 15th – 9am MT

Director Whitman

Public Meeting adjourned at 2:50pm MT

A motion to enter into executive session was unanimously approved.



9. Executive Session

Chairman Hendricks

Executive Session including Brian Jeffries at 2:54 pm MT.
Executive Session adjourned at 3:32 pm MT

Minutes Approved



Robert King, Chairman

Date 12/15/2023

APPROVED