

Enhanced Oil Recovery Commission



Enhanced Oil Recovery Commission 4th Quarter Business Meeting

May 9, 2012
Casper Petroleum Club
Casper, Wyoming

Commission Members Present:

Peter Wold, Chairman
Bruce Williams, Vice-Chairman
Eli Bebout
Tom Drean
Betty Fear
Aaron Otteman
Rob Hurless

Commission Staff:

Kathy Olson, EOR Commission Staff Assistant

Enhanced Oil Recovery Institute Staff:

David Mohrbacher, Director
Sheena Xie
Allen Tanner

Guests:

Jimmy Goolsby

The Commission thanked Karl Osvald from the BLM for attending this meeting. Mr. Osvald confirmed that they are here to work with the Commission and urged people to commit and comment on any of BLM's actions.

Director Mohrbacher introduced Richard Garrett from the Wyoming Outdoor Council. Richard is the energy and legislative advocate with the Wyoming Outdoor Council. Garrett announced that he was excited about CO₂ enhanced oil recovery wanted to convey that sense of opportunity to the members. Mr. Garrett stated that they're trying to take a realistic approach to energy development.

I. Call To Order

Chairman Wold called the meeting to order at 8:00 am. Mr. Wold extended a thank you for the recognition dinner the previous evening.

II. Approval of Minutes

Amendments to the April 10, 2012 Special Teleconference Meeting and the February 1, 2012 business meeting minutes were discussed.

Commissioner Bebout moved to approve the Business and Executive Session minutes from the February 1, 2011 meeting in Denver, as well as the minutes for the April 10, 2012 Special Teleconference Meeting minutes.; Motion was seconded by Commissioner Fear. Motion carried.

III. Commission Open Discussion

Chairman Remarks

Chairman Wold began open discussion by stressing the increasing importance of the work of this institute. He noted the success the industry has been having with supplying natural gas. He added that we see the state hurting with the Governor's request of an eight percent cut in the budget. Wold voiced that it was the Commission and the Institute's responsibility to support the state in any way that it can.

EPA Policy Development on Classes of Wells

Commissioner Bebout proposed to the Commission that it take a position on EPA policy development on regulations for classes of wells. Mr. Bebout pointed out that going under Region 8 EPA Class 6 would have a negative impact on enhanced oil recovery efforts. Director Mohrbacher suggested that EORI do what they did with RMP: Provide a technical basis for how CO₂ is used in enhanced oil recovery, how much stays in the subsurface, how we know it stays there forever, and how do the regulations affect operations. Commissioner Drean suggested setting up a committee but emphasized the importance of understanding what the work is going to lead to and what the end product will be. Director Mohrbacher offered to come up with a preliminary list of the technical issues related to Class II versus Class VI wells and provide it at the September EORC meeting. He will keep the Commission updated on the progress in July. Commissioner Hurless, Commissioner Bebout, and Director Mohrbacher will continue to monitor and keep the Commission informed of any development and information for the Commission.

Chairman Bebout made a motion to have staff look at the possibility of getting involved in the EPA issue relative to greenhouse gases and types of class wells and to have a recommendation made to us by the September meeting. Commissioner Williams seconded the motion. Motion carried.

Director Mohrbacher introduced an action item to inventory simple explanations of how CO₂ enhanced oil recovery works and to evaluate adapting that information specifically to Wyoming; this action item will be completed by the July meeting.

Energy Producing States Coalition

Commissioner Bebout discussed the Energy Producing States Coalition to the Commission. The initiative is for energy-producing states in our country to establish a unified position on different issues that we take to the federal government to try to help with the energy sector. The states currently involved are Wyoming, Utah, Alaska, and North Dakota, and possibly Texas and Oklahoma. Mr. Bebout expressed that the Coalition is having

trouble getting commitment and suggested that if the opportunity arises, Director Mohrbacher present to the Coalition about enhanced oil recovery and some of the important issues seen in Wyoming.

Presentation to Minerals Committee

Commissioner Williams suggested that it would also be helpful if Director Mohrbacher present to the Minerals Committee and speak on the success stories of the Enhanced Oil Recovery Institute in Wyoming. Commissioner Bebout stated that the Minerals Committee would benefit from being informed on proposed statutory changes.

Fracking

Commissioner Dreaan explained that the State Geological Survey will be putting out a website and pamphlet educating the public about fracking. This information will be from an unbiased, scientific, and geological point of view. Mr. Dreaan stated that public opinion is set on their views of fracking.

Commissioner Dreaan stated that another issue that they could possibly get ahead of would be injection wells and fracking as it relates to earthquakes. He pointed out that he's been working with Tom Doll at the Oil and Gas Commission to plot earthquake activity within the state and relate it to injection well locations and large frack jobs. The online map will be interactive and will show the public that there is no relationship between fracking and earthquakes. They're hoping to have it completed in 6 months. Commissioner Otteman pointed out that there are measurable seismic events related to injection, but they're not earthquakes or of that magnitude. He added that with microseismic work and diagrams, we can show the public quickly that the migration issue of these fluids into the subsurface is minimal and you can't frack into a groundwater system.

IV. Director's Overview

Director Mohrbacher mentioned that the industry continues to grow. He discussed some of the accomplishments of EORI, including the SER Grant for \$467,000 for new PVT Equipment, outreach plans for the BigHorn Basin, growing the Minnelusa Consortium, investment in the Powder River Basin, and opportunities for thermal enhanced oil recovery and gas injection. He pointed out that 60 percent of EORI's efforts are focused on reservoirs such as the Tensleep and the Minnelusa, 20 percent on supporting small operators, and 20 percent on applied research.

Mohrbacher discussed the organizational chart and the team approach for accomplishing project objectives. He discussed the mandated peer review of EORI work products. He added that they are working on expanding the relationship with the University through the School of Energy Resources, the College of Business, the College of Engineering, Geology/Geophysics, and the Energy MBA Program. A RPSEA Proposal (Research Partnership to Secure Energy for America) was submitted which includes the Geological Survey. Mohrbacher discussed the outreach team and their progress with new business relationships.

Mr. Mohbracher discussed the new energy building; the selection of furniture and lab equipment has begun. EORI offices will be on the third floor, laboratory on the second, and access will be given to all the teaching facilities and AV labs. He said that they would have new audio-visual 3D capabilities through Schlumberger's software.

New efforts for EORI were mentioned: evaluation and improvement of methane injection and defining a chemical flooding program that encourages participation in field demonstrations. Mohrbacher discussed

staff retention and turnover. An EORI project roadmap, integrated projects, and scoping economics were addressed.

V. Old Business

a.) EORI Chairman

Chairman Wold entertained motions for the new chairman. Commissioner Bebout nominated Vice Chairman Williams for Chairman. Commissioner Hurless seconded. Vice Chairman Williams accepted the nomination. No further nominations were made. Motion carried. The floor was opened for nominations for Vice Chairman. Commissioner Bebout nominated Commissioner Fitzsimmons. Commissioner Williams seconded. No further nominations were made. Motion carried.

b.) Status of EORI Spending for 2012

Kathy Olson outlined the proposed eight percent budget cut of approximate \$234,193. There is an estimated unspent amount of \$168,000 for fiscal year 2012 and a short fall on the SER equipment proposal of \$200,000. In order to achieve the 8 percent cut, there would be a cut in one position, a portion of faculty support, and a smaller portion of Commission funds. The Commission discussed the 2012 Equipment Software, Lab Expenditures and Licenses Budget. Commissioner Drean wants to make sure that there is an adequate budget for increasing software costs associated with acquiring new equipment. Director Mohrbacher suggested an action item for Sheena Xie to come up with an idea of what the software costs will be in regards to the lab equipment purchase. It was recommended to combine software, equipment, and field demonstration budgets for fiscal year 2013-2014. Commissioner Bebout moved that the 2012 Budget Update Report and the Proposed Purchases be approved. Commissioner Williams seconded. Motion carried.

VI. New Business

a.) Staffing

Director Mohrbacher discussed the annual renewal of EORI researcher contracts and the decision to not renew one contract. Three and a half positions are now open. Sheena Xie will be the new lab group leader but will remain on the outreach team. Mohrbacher talked about the possibility of adding a position that would lessen the workload of Kathy, Glen, and Sheena from conference and workshop planning. He reviewed the position description for Reza Barati's position. He requested the Commission to provide comments to him, if necessary.

b.) Status of SER One Time Equipment Purchase Proposal

Director Mohrbacher presented a copy of the SER Lab Equipment Proposal to the Commission for the PVT Cell and the Slimtube Apparatus. The equipment will be used to evaluate reservoir conditions and gas flooding, nitrogen, methane, and CO₂; The equipment will be shared with SER. SER approved \$467,000 of the \$667,000 requested; \$200,000 is still needed. Commissioner Drean voiced concern about whether the cost of the equipment accurately captures associated overhead costs. Mohrbacher said the costs of equipment purchase and labor were accounted for, but a more holistic view of the cost would be put together as an action item. The SER equipment will need to be ordered by June 30th. Mr.

Mohrbacher proposed that the \$200,000 be funded by allocating \$50,000 from the 2013 fiscal year equipment budget and \$150,000 from the 2012 fiscal year equipment budget. Commissioner Bebout moved to accept this recommendation. Vice-Chairman Williams seconded. Motion carried. Commissioner Dreaan abstained.

c.) Update Tensleep Workshop Program

Sheena Xie gave an update on the Tensleep Workshop that will take place on June 5-6, 2012. The steering committee meeting was held in mid-April. There will be roughly 18 people in attendance. Marathon, Merit, and Legacy Reserves have provided field case study data. Two more workshops are planned in October and January. The target audience is geologists and engineers with 0-5 years of experience.

d.) EORI Participation in WPA Pipeline Siting Project

EORI is participating in the Wyoming Pipeline Authority Corridor project. The purpose is to establish a network for conversion points. The Legislature put two million dollars towards this budget. There will be participation by both the School of Energy Resources and the Enhanced Oil Recovery Institute. The Pipeline Authority's quarterly meeting is in Casper on May 15th.

e.) Annual Update of EORI Strategic Objectives

Director Mohrbacher outlined the updated version of EORI's strategic objectives. Mohrbacher stated with regard to outreach that his vision is for everyone to participate. Every project has a project manager who handles the technical aspects of the project, and a project director that manages the relationship. For the new building category, small adjustments are being made to office spaces for practicality. Concerning the new building, a tour for the EORC's is being set up after the July meeting. Director Mohrbacher highlighted the changes under the technical program category. Under 9A, he added, "and implementation to chemical flooding." Mr. Mohrbacher requested feedback in writing on the proposed changes to the strategic objectives.

f.) EORI Conference Planning

Director Mohrbacher presented an update from Glen Murrell on the two EORI conferences. The CO₂ Conference is in Casper on July 11-12, 2012, and the IOR Conference is in Jackson on September 10-11, 2012. Both conferences are planned. Sponsorship-to-date for the CO₂ Conference totals over \$33,000 with an additional \$12,000 currently being pursued. The CO₂ conference will have booths for rent, at \$1,000 per booth. There will also be a speed interview set up between suppliers, investors, and operators with a charge to participants.

g.) Project Status

A project status update was reviewed by the Commission. All projects not covered by a confidentiality agreement were included. With regard to lab work, low salinity flood evaluations were completed in the Minnelusa. There is currently work being completed in Kirby Creek. Director Mohrbacher proposed that EORI present a schedule of lab work at the next Commission meeting. An action item was added to have Eric and David complete a draft of recommended changes to the EORC legislation by the July meeting.

VII. Review EORI Calendar – Set date for next meeting

Kathy Olson noted that the next EORC meeting will be held July 27th in Laramie at the Hilton. The Technical Advisory Board meeting will be July 26th.

VIII. Executive Session

Commissioner Drean moved to go into Executive Session to discuss confidential projects. Motion seconded by Commissioner Otteman. Executive Session was adjourned at 1:45.

IX. Action Items

1. Director Mohrbacher will update the Commission at the September meeting on any EPA policy development on regulations for classes of wells.
2. Director Mohrbacher and Sheena Xie will look at the software needs and the total cost pertaining to the lab equipment and provide a summary at the July EORC meeting
3. Director Mohrbacher and Kathy Olson will present a new proposed budget, combining the field demonstration budget with the equipment and software categories at the July meeting.
4. Director Mohrbacher and Eric Easton will complete a draft of recommended legislative statute changes by the July EORC meeting.
5. Commissioner Drean and Director Mohrbacher will inventory simple explanations of how CO₂ EOR works and evaluate adapting that information into a Wyoming-specific CO₂ EOR brochure by July.
6. David Mohrbacher and Sheena Xie will make sure the budget is sufficient to maintain the cost of software licenses.
8. Commissioner Drean, Tom Dahl, and David Mohrbacher will address the hydraulic fracturing/earthquakes concern.
9. Director Mohrbacher will present proposed budget cuts along with speaking about EORI's success stories at the Minerals Committee in August.

X. Adjournment

Commissioner Drean motioned to adjourn. Commissioner Otteman seconded. The Enhanced Oil Recovery Commission meeting adjourned at 1:45 PM.