

Enhanced Oil Recovery Commission



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1st Quarter Business Meeting

July 27, 2012
Hilton Garden Inn
Laramie, WY

Commission Members Present:

Bruce Williams, Chair
Tom Drean
Jimmy Goolsby
Aaron Otteman
Tom Fitzsimmons
Eric Easton

Commission Staff:

Barb Jesse, EOR Commission Staff Assistant

Enhanced Oil Recovery Institute Staff:

David Mohrbacher, Director
Sheena Xie
Allen Tanner
Glen Murrell

I. Call To Order

Chairman Williams called the meeting to order at 8:00 AM

- II. **Approval of Minute** Commissioners made amendments to the May 9th meeting minutes. The commission voted to accept the minutes as amended

III. Commission Open Discussion

Chairman Remarks

Chairman Williams began discussion by reviewing the previous day's TAB meeting, reporting that TAB members were positive about the progress and direction that EORC was going with its various projects. Chairman Williams and Director Mohrbacher affirmed that TAB meetings are public, and that commission members are encouraged to attend the meetings. The May 8th TAB meeting focused on the Minnelusa Initiative, while the upcoming January meeting will focus more on Tensleep and other projects EORI is involved in. Chairman Williams opened up the floor to further comments.

Review of Marathon Involvement

Director Mohrbacher reviewed the involvement of Marathon, whose representative Allen Brummert participated in the meeting. Marathon is showing a passion to participate, and is showing an interest in sharing their expertise to benefit others working with EORI.

IV. Director's Overview

Director Mohrbacher reported on various projects going on in the state:

Denbury is currently working to complete the Greencore Pipeline and capital investment for initiation of CO₂ flooding at the Greive Field. Both projects are scheduled to come on line during late 2012. Linc Oil laid off staff that were hired in Casper to work on the Glenrock fields. The Wyoming Pipeline Authority is currently working with BLM and other stakeholders to find permanent CO₂ pipeline corridors that can also be used for other utilities. Those interested in the project can find out more at either the Wyoming Pipeline Authority website, or the EORI website.

CO₂ production from the Conono Lost Cabin plant is scheduled to come online during late 2012. The recovered gas will be transported in the newly completed Greencore Pipeline. Gas production from [Riley Ridge], including methane and CO₂ production, is currently in CO₂ Phase 1, and should come online in 3-5 years. They have not yet permitted their pipeline right-of-ways, which is why Director Mohrbacher is extending a conservative timeline.

DKRW is prepared to break ground in 2013. The company is having trouble getting fixed-cost bids from big construction firms. Additional, new CO₂ floods are being planned, but have not been announced to the public. Director Mohrbacher reported that EORI continues to make progress with its technical program. Active projects include ROZ characterization, the Tensleep workshop program and continued evaluation of new projects with feasibility studies.

Director Mohrbacher also reported on progress with aligning faculty research with EORI. Faculty members have turned in work-plans that detail projects for the upcoming year, which include milestones and detailed budgets.

Director Mohrbacher discussed the expansion of the Minnelusa Consortium. EORI is currently working on 3 reservoirs, but would like to expand to 10-12 reservoirs.

Director Mohrbacher discussed the current challenges that EORI is facing. One of the major challenges involves hiring, training, and retaining well-qualified staff. Wyoming operators are also facing the challenge of hiring, training, and retaining well-qualified staff.

Director Mohrbacher addressed the current challenge of prioritization in EORI projects, due to the current limit in staffing resources. Chairman Williams stressed the importance of making sure that not only EORI remain focused on Wyoming-centric projects, but that EORI-affiliated faculty does not get distracted by obtaining grants while honoring faculty commitments to EORI.

Director Mohrbacher conferred with Sheena Xie about additional promised core contributions for the Tensleep program, and how EORI does not anticipate storage problems with core contributions in the near future.

Director Mohrbacher also discussed plans for EORI's move into the new Energy Innovation Center. Offices will be moved to the new space during early to mid-November. The move into the EORI laboratory will begin during January, and will likely extend into March 2013.

V. Old Business

a.) Update EORI spending for the 2011/2012 biennium

Barb Jesse reported that some of the project-affiliated faculty members have overspent their budgets. Ms. Jesse announced that approximately \$10K of EORI money will revert back to the state at the end of biennium.

Director Mohrbacher confirmed that EORI does not pay overhead to the University for staffing or building needs, in exchange for working with University faculty. Chairman Williams commented on seeing an increasing trend of faculty choosing organization-related projects, as opposed to faculty choosing their own projects.

Chairman Williams also announced that there will be budget updates at quarterly meetings, which will include a budget forecast for the next six months. Chairman Williams discussed the advisability of a reallocation report in January, as opposed to May, so that there can be an application for left-over School of Energy funds. Chairman Williams reported that Director Mohrbacher will present any need for extra equipment expenditures at the January meeting, for which there will be a commission pre-approval to solicit leftover SER money.

b.) Update continuing software costs for lab equipment

Sheena Xie reported that the laboratory has acquired \$1.2 million worth of lab equipment. She also reported that training packages are included in the equipment budget, since the purchase of significant equipment almost always requires the additional purchase of training packages.

Ms. Xie reported that other software costs are paid by the University, or are obtained through the University at a highly-reduced rate.

Ms. Xie predicted that the costs of equipment maintenance would be reasonable. These costs are currently budgeted as part of EORI supplies and equipment. She emphasized that all users of the equipment will be trained first in order to avoid excessive expenses.

Tom Drean reported that most software requires an upgrade every 3-5 years, without which an instrument will lose service or degrade. Mr. Drean advised looking into the possibility of upgrade costs in order to inform future budgets. Allen Tanner confirmed future upgrade costs are included in the existing EORI budget. Equipment software will be maintained through budgeting for upgrades.

Director Mohrbacher announced that there will be flexibility in faculty and staff budget, which can be reallocated to software upgrade costs if necessary. Mr. Tanner recommended listing actual software and maintenance fees in the budget so that upcoming software upgrade costs can be seen in more detail.

Ms. Xie agreed to check into possible future software upgrade costs for use in future budgets.

c.) Present revised EORI budget

Ms. Jesse reported that \$96,000 has been budgeted for the commission, which reflects salary obligations, agreements from faculty to hire students, software licensing costs, outreach, and travel costs. Chairman Williams requested that fringe benefits be added to the budget report.

d.) Suggested Revisions to Legislation

Director Mohrbacher recommended deferring the discussion of suggested revisions to legislation until the September meeting. Director Mohrbacher recommends releasing a memo indicating change of intent. Chairman Williams agreed with the recommendation and proposed circulating the proposed changes by email, after which a letter can be drafted at the September meeting. Chairman Williams discussed the plan to send the drafted commission letter to the Drug and Minerals Committee.

e.) Review status of historical action items

1. Director Mohrbacher will update the Commission at the September meeting on any EPA policy development on regulations for classes of wells. Action item tabled until September.
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. Action item tabled until September.
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.

Director Mohrbacher reported that plans are still going forward with this action item, but that staff positions need to be fulfilled in order to complete the action item.

6. David Mohrbacher and Sheena Xie will make sure the budget is sufficient to maintain the cost of software licenses. Action item addressed.
7. Commissioner Drean, Tom Doll, and David Mohrbacher will address the hydraulic fracturing/earthquakes concern.

Mr. Drean reported that the Geological Survey website will soon host an interactive map that locates every injection and [fractured] well, which also presents whether a specific well was [fractured] or how long it has been injecting, and how much. Super-imposed on that map will be a map of historic earthquakes, as well as current daily-updated earthquakes. Viewers of the interactive map will be able to draw their own conclusions about drilling activity.

8. Director Mohrbacher will present proposed budget cuts along with speaking about EORI's success stories at the Minerals Committee in August.

Chairman Williams will discuss with Director Mohrbacher about whether Chairman Williams will present at the Minerals Committee in August.

f.) Other

Eric Easton provided articles to review, concerning core space ownership issues.

Chairman Williams discussed the issue of CO₂ sequestration regulation by the oil and gas entities. Director Mohrbacher reported that the EPA is currently working on creating guidance on how to determine what CO₂ was injected, vs. native CO₂ amounts.

VI. New Business

a.) Staffing

Director Mohrbacher reported recommended changes to current staffing structuring, which EORI has reviewed with both Chairman Williams and the University of Wyoming. The University has approved all positions and will assist in the proposed changes.

Sheena Xie has been transferred from the Outreach Manager position to the Group Leader position in Lab Studies. Glen Murrell has filled in as Outreach Manager, along with fulfilling his current position as Associate Director.

Director Mohrbacher reported that there is still a need for office management and outreach. EORI has created the Outreach Coordinator position, which will be managed by Mr. Murrell.

Director Mohrbacher expressed the plan to concurrently hire for the recently-vacated Office Manager position while also hiring the support staff, due to historical difficulties in hiring appropriate support staff. Historical difficulties have involved previous Office Managers' lack of time in fulfilling position duties while also supervising the hiring of a support team. Director Mohrbacher discussed the difficulties experienced in staffing if the Office Manager position is vacated, with no support-staff to support the organization between hiring's. Tom Fitzsimmons expressed the importance of allowing an Office Manager to create his or her own team, to which Director Mohrbacher expressed a possibility of trying one more time. Director Mohrbacher predicted the Office Manager position to be filled by November 1st, with the next support-staff position filled by February 1st. Barb Jesse confirmed that she felt confident that EORI could be advertising for the vacated Office Manager position beginning Monday, July 30th.

Director Mohrbacher also addressed additional hiring needs, which include an open scientist position—which is predicted to be filled by November 1st—and various other scientist positions that will be advertised for in an ongoing manner, with a job opening that will be continually recruited for. Director Mohrbacher expressed confidence in having the resources to pursue more than two personnel needs at a time once the Office Manager position has been filled.

b.) Update Tensleep Workshop Program

Sheena Xie reported on the first Tensleep workshop, which took place in June in Cody. Topics covered were water flooding, water management, and laboratory considerations.

Ms. Xie reported that the first day of workshop reviewed water flooding, while the second day of the workshop addressed water management, laboratory water flooding, and wettability of Tensleep formations.

Ms. Xie reported that geologists, physicists, technical managers, and business managers attended the workshop, along with operators. All workshop participants had previously worked in Wyoming reservoirs.

Ms. Xie reported on concerns brought up in the workshop participant survey: request for more field cases, communication between participants (passing out business cards), and round-table discussions. All participants expressed an interest in attending future workshops, namely the next workshop addressing EOR in the Tensleep Reservoir. Most participants also expressed an interest in attending the third workshop on CO₂.

Ms. Xie announced plans for the second Tensleep Workshop, which will be planned for the end of October, again in Cody. Because the workshop will address EOR methods, mineralogy and characterization will be important topics.

Tom Fitzsimmons offered the services of his industry staff in the planning of future workshops; Mr. Fitzsimmons expressed his staff's ability to take care of non-technical logistics such as venue logistics, invitations, etc.

Ms. Xie also addressed topics for the third Tensleep Workshop, which will address CO₂ EOR in the Big Horn Basin. Mr. Fitzsimmons informed meeting members that Legacy has the willingness and resources to pay for a graduate student or intern to research Legacy data in order to present at the third workshop. The third workshop will focus on use of CO₂ EOR and development of Tensleep ROZs associated with large reservoirs located in the Bighorn and Wind River Basins.

c.) EORI Conference Results

Glen Murrell reported on the Annual Wyoming CO₂ conference, which took place July 11-12 at the Casper Convention Center. The conference reported a record number of 266 attendees. The conference planning involved a greater degree of marketing through co-hosting a workshop held in conjunction with the conference, as well as utilizing media partners. Mr. Murrell also reported that the conference offered for the first time a professional development certification, which was well-received by conference attendees. End-of-meeting surveys demonstrated increased trends in overall attendee satisfaction, attendee satisfaction with support materials, facilities, and agenda. Mr. Murrell also discussed plans already underway for next year's conference, which is predicted to continue to expand, including the additional of a co-panel, an increased association with workshops, and an agenda that will increase focus on CO₂ supply and geology, ROZ case studies, and foam pilots. Mr. Murrell also commented on the survey-results that demonstrated a high regard in attendee perception of EORI capabilities.

Mr. Murrell also reported on the Annual IOR/EOR Conference, which will take place Sept. 10-11 in Teton Village in Jackson. Mr. Murrell announced that he was approached by Society of Core Analysts (SCA) to become involved in the Society's 2013 meeting, which has a planned location in Wyoming. Mr. Murrell discussed the importance of EORI's partnership with the Society's meeting; the Society will provide coordinating and funding, and EORI will receive greater opportunities for networking and expert discussion of Wyoming-centric issues, at no cost to EORI.

d.) Project Status, and

e.) Update Prospects

Director Mohrbacher called for a discussion of public EORC projects, and wanted to thank Glen Murrell for planning far enough in advance to facilitate the high quality of EORC conferences and functions.

Tom Fitzsimmons proposed the topic of confidentiality, with an example being that Legacy would like the confidentiality agreement concerning Kirby Creek to be terminated, and for findings to be put in the public domain. Chairman Williams asked whether EORI can do work for a company that a commissioner is associated with, and whether that should be considered a conflict-of-interest. Eric Easton answered that the Commission has maintained project-selection blindness, and that confidentiality is a separate issue. Confidentiality should be maintained if a company is providing proprietary data to EORI to use and manipulate. Unless there are special considerations, or special work being done for a company, conflict-of-interest is not a current concern; if EORI runs out of resources and is obliged to prioritize projects, then there may need to be a more formal system introduced to project selection.

Director Mohrbacher proposed that there be special provisions for Commission members to recuse themselves from specific issues with which there are possibilities for conflict. Mr. Easton suggested that it might help to have a process in place to evaluate projects in a blind way, and that the University already has policies in place that may help develop EORI policies.

Addressing the issue of confidentiality, Director Mohrbacher reported that EORI does not share raw data, and is currently putting in place a policy to cleanse any confidential field or individual well details from documents before posting presentation information publicly.

VII. Review EORI Calendar

Director Mohrbacher proposed Thursday and Friday, Jan. 10-11 for the next EORC meeting. Chairman Williams affirmed the suitability of the dates, with the TAB meeting taking place on Jan. 10th, and the Commission meeting taking place on the 11th.

VIII. Adjournment

IX.

X. Action Items

1. Barb Jesse and David Mohrbacher: Advertise for and hire Business Manager
2. Barb Jesse: Present budget, reallocate and re-appropriate if necessary
3. Sheena Xie and Allen Tanner: check on upgrade costs for software—upgrade, license, or maintenance fees?
4. Eric Easton and Glen Murrell: research UW policy on conflict-of-interest, address EORI approach to conflict-of-interest, thought towards developing standardized project criteria
5. Address policy and review future of confidentiality agreements

6. David Mohrbacher: send out suggested changes that he and Mr. Easton have come up with; consider writing a letter based on that information, to the Mineral Committee chairs to point out where EORI deviates from current legislation