



Enhanced Oil Recovery Institute

Enhanced Oil Recovery Commission

4th Quarter Business Meeting Minutes

Casper, Wyoming

May 9, 2011

Commission Members Present:

Chairman Peter Wold

Commissioner Bern Hinckley, Public

Commissioner Betty Fear, University of Wyoming Trustees

Commissioner Bruce Williams, Oil & Gas Commission

Commissioner Eli Bebout, Senator, State Legislature

Commissioner Tom Fitzsimmons, Public

Commission Members Absent:

Ex-Officio Commissioner Wally Ulrich, Wyoming State Geologist

Commission Staff:

Eric Easton, EORC Attorney, Senior Assistant Attorney General

Kathy Olson, EOR Commission Staff Assistant

Enhanced Oil Recovery Institute Staff:

Director Mohrbacher

Glen Murrell, Associate Director

Allen Tanner, IT Specialist

Barb Jesse, Accounting Associate Sr.

I. Call to Order

Chairman Wold called the meeting to order at 10:00 am. Chairman Wold welcomed the new faces and asked that everyone introduce themselves and explain what their relationship is to the Commission. He reiterated how the eight EORC commission slots are to be represented from the state. Governor (Matt Mead) and the State Geologist (Wally Ulrich) serve as ex-officio members. We have one legislative member appointed by the management council who is Senator Eli Bebout. The governor shall appoint the remaining members, one of whom should be a member from the public at large with experience in oil and gas. One should be a member of

the Oil and Gas Conservation Commission, two should be representatives from the oil and gas industry and one should be a representative from the University of Wyoming. We have one slot that has not been filled from the Governor's office. Chairman Wold explained that he did not believe Governor Mead had filled the position yet. He has talked to the Governor about it and is waiting for the right person but doesn't yet know who that person will be. Commissioner Fitzsimmons inquired as to whether the Governor has a natural resources staff and how the selection is set up. Commissioner Bebout responded that the Governor has a person who is in charge of energy from the Wyoming Business Council. This person is looking for someone who is more involved with oil and gas and EOR, similar to a Rob Hurless type position, since there are many projects out there involved with energy. He is interviewing some good candidates, but the key person has not been appointed yet. He thinks it will happen soon.

II. Approval of Minutes

Business Meeting, January 19, 2011

Commissioner Hinckley requested that in the future the action items be attached to the end of the minutes. He also suggested that much of what is not confidential from the Executive Session also be moved to the regular business meeting minutes and be made available to the public. Commissioner Hinckley suggested that they confine the Executive Sessions to a minimum and keep discussions appropriate to the Executive Session. Attorney Easton agreed that we need to be more open on those items that aren't specifically considered trade secrets, business practices or direct discussions with companies regarding prospective projects, items which don't fall into the category of privileged information. Director Mohrbacher expressed his concern about a meeting discussion being made public regarding work for a specific company who may be sensitive about that work being publicized along with the issue of competition for fields we're evaluating. He feels that it's important to be compliant with our confidentiality agreements and for the most part, we have erred on the conservative side. Commissioner Fitzsimmons agreed to err on the conservative side but being conservative means being transparent. If a company is participating in any of our work, that is one thing, but the results of that work, he can appreciate the proprietary nature of it. Commissioner Bebout expressed that we need to be careful to not mention work in specific fields by a particular company, and that these companies need to have a certain comfort level that when they come into EORI to allow us to look at all their data, but if they want it confidential, we need to comply. Commissioner Fitzsimmons explained that he feels it's acceptable to mention names of companies doing work in the state of Wyoming to develop additional oil reserves and that he understands the proprietary nature of further detail, but that the transparency shows that we're not doing work for companies that are directly related to the Commission. Commissioner Bebout stated that if there is a conflict of interest due to personal gain, then you have to declare a conflict and abstain. Commissioner Williams recommended removing the names associated with the two new projects and strike the name of who is hosting the Minnelusa Consortium and transfer the remaining Executive Session minutes to the regular session. Chairman Wold discussed that if we don't have a certain element of

disclosure about who we're working with and what we're doing, we are in conflict with the mission of the Commission. We need to be able to tell the Legislature who we're working with. It hasn't been a secret and we've put out press releases that have been approved by various companies explaining the project and that we have a good track record. One initial purpose was that the Institute would undertake research for a company but the criteria for accepting that work is that these applications be shared with other companies so the research is ideally going to be disclosed at some time so everyone can benefit due to spending Wyoming tax dollars. Director Mohrbacher added that the information remains confidential for a 24 month period, according to the Confidentiality Agreements which provides protection and becomes public thereafter. Attorney Easton requested that a copy of the current Confidentiality Agreement be sent to him for his review.

Commissioner Williams made a motion that we move all of the information from the Executive Session minutes to the general session minutes with the exception of the two paragraphs relating to new projects containing the names of companies involved, and strike the name of the hosting party of the Minnelusa Consortium. He also motioned that we approve both sets of minutes. Commissioner Bebout seconded. Minutes are approved as amended.

III. Commission Open Discussion

Commissioner Bebout stated that since he is new to the Commission, he hasn't had the benefit of prior discussions, but that he has a problem with the EORI Director reporting to SER. EORI has its own budget and Commission. Chairman Wold explained the history of EORI and the fact that there was discussion about not having EORI located at the University of Wyoming. It was decided that UW was the best place to have the Institute due to the ongoing research and the staffing/payroll, etc that go along with a stand-alone agency. There has been some push by the University to envelop us. Jim Steidtmann had an autonomous relationship with the School of Energy Resources and Mark Northam. When Director Mohrbacher came on board, it was firmed up that he would report to the Director, Mark Northam, and SER would be a sort of umbrella under which the research was done for the Institute. The Commission had a conference call with Mark Northam in Feb, 2011. The relationship between Mark Northam and Director Mohrbacher is strong and healthy, a symbiotic relationship where they help each other.

Director Mohrbacher remarked that the relationship with SER has been evolutionary and cooperative. It works for him as long as Mark Northam is at SER. He explained the differences between EORI and SER with changing focuses on China and the Niobrara Shale. Commissioner Bebout agreed that the University has a real function in what we do but that there are certain things they shouldn't do. SER is funded by AML money which has been taken away for the next couple biennium's, so that is up in the air. Who is going to pick up the \$18 million biennial budget? Is it going to be the University or the legislature, or somewhere else? He stated that he does not want to see EORI get caught in that kind of discussion, and if it makes a difference as to whom he reports to. Commissioner Bebout asked Director Mohrbacher who hired him. Mr.

Mohrbacher replied that it was the University. Mr. Bebout explained that he looked at the pipeline authority and the infrastructure authority and there are also some constitutional issues to maintain and that this is a separate operating agency. It was very difficult in the last session to try to get language that truly set up the pipeline authority and infrastructure authority to be separate in order to carry out certain things. He needs to review the statute on EORI but it's probably similar. He reiterated that those were his concerns. Chairman Wold stated that Tom Stroock was a charter member on this organizing board and he felt strongly that EORI be an autonomous separate agency, distinct and removed from the University of Wyoming. The prior EOR project under UW contained a lot of research the doctoral candidates and professors at UW were interested in doing, but with not much relevance to what was happening in the state of Wyoming out in the field. We decided to not go that route and we will make this agency function with the industry and that's the direction we've tried to keep it.

Commissioner Fear agreed that the University does a lot of wonderful research but that it needs to get out the door, into the field and into the hands of the producers where it is useful instead of the research staying at the University in a silo, which happens frequently in a university setting. When she was appointed by the Governor that was how it was explained to her.

Commissioner Bebout inquired about the two-year cycle for funding and whether there is a permanent statute that sets the Commission separate. Attorney Easton confirmed. Commissioner Bebout said that since the Commission shall oversee and direct development of the Institute, if we are going to do something under SER, then we have that latitude. It doesn't say that we shall hire, it just says that we shall oversee and that is clearly within the law. Attorney Easton also confirmed that the language hasn't been amended and has rolled over from the last budget session. Commissioner Hinckley added that there have been budgetary footnotes that have remained the same for the past two sessions. Attorney Easton remarked that it is interesting to look at Sub-Section B as it talks about the Commission in conjunction with UW and the Oil & Gas industry, but that below, it says the Commission shall direct so we have that line about what the relationship is and the remaining part is vacant. This hasn't been amended.

Chairman Wold explained that we have let go of the carbon sequestration work and that we felt that we could do better by focusing more on producing oil than from CO₂. Ron Surdam from Carbon Management Institute, under SER, has picked that up, so the language in that statute could be amended to reflect what we are actually doing, however, Rob Hurless advised to leave the language as is.

Commissioner Hinckley pointed out that we have a continuing action item that directs us to look at the legislation and that at the beginning, it doesn't set up EORI. It says the legislature is funding money for a program with the Institute for Energy Research which was an existing University agency at the time. When the legislation says there is an Institute at the University and we are going to fund that entity through the Commission, there's a commitment right from the beginning that we are not going independently. The legislature was giving the money to this

establishment at the University and now that IER doesn't exist anymore, the action item suggested that maybe we are ready for some redirection of legislation. EORI has continued to function as an entity of the University, the budgets go through the University and the University presents the budget to the legislature. The footnote that was added two years ago required that the Commission approve any EORI contracts, a practice that has fallen by the wayside.

Commissioner Hinckley thinks that it may be due to inertia and relationships between the universities are such that it is a University program, and effectively the legislature has funded that program within the University structure. So, given that everyone at EORI is a University employee, is hired and fired and given compensations by the University, the Commission's role has defacto and an advisory role. He suggested that we either keep it as advisory or assert it as an independent agency. There has been some recent push within the Commission to get more assertive about EORI as an agency rather than simply as a funding mechanism for a University program. That would mean taking control of budgets and staffing. The objective analysis is that EORI operates as a function of the University as the funding source.

Commissioner Bebout responded that it's not about working with the University, but that we need to look at the big picture. With all the components for different things going on in different directions, and with SER and EORI having independent boards with separate budgets, there is some discussion about how does the legislature really understand and appreciate what they all do. At one time we had a Wyoming Energy Commission that spearheaded all of this but it was eliminated. The statutes are still in place to have that Commission, we have sequestration, the GE project, etc. Commissioner Bebout is assessing how we look at all of these differently. There are some concerns out there regarding all of the funding for coal gasification, different clean coal technology and SER as well as concerns about how it all fits together. This is what the Minerals Committee is doing. He'll give it some more thought. With the uncertainty of the budget being every two years, people don't know if they will have a job in the next budget session. Maybe we need to have some discussion about having it permanently in the statutes.

Commissioner Hinckley welcomed Commissioner Bebout's legislative presence in this discussion. This is kind of an experiment about how do you as a legislature get your hands around a piece of money and make sure it's used responsibly. One option is like the council that was set up for the SER, the experiment here was to set up a separate agency to try and accomplish that type of oversight. As a student of state government questions like does this work are welcome? This is an experiment and now that we are five years in, what has worked and what hasn't? I would like to see the legislature look at the relationship and see what we are trying to do and if this notion of independent agency is really an effective way to accomplish that.

Director Mohrbacher believes we are providing returns to the state and we just need to figure out how to accelerate that, if anything. His mandate was to basically take the Institute to the field and we are doing that. I see this Commission as providing a lot of direction. You basically see our staffing plan and make comments on that and you see our budgets which are transparent. We

show results, you have seen them and we are excited about them. SER definitely wanted him to work in China and the Commission voted not to have EORI do that, so we're not. We have backed off of shale due to the Commission's concerns, but will help SER and the Geology Department pursue it, yes we are not going to participate in it at this point. When he first started, he asked the university to help him strategically align with the Board and its happening. The biggest vulnerability we have is if Mark Northam leaves, we know he is not going to stay forever. So what happens when Mark's influence is taken away? He didn't know how to address the hypotheticals.

Chairman Wold concluded the opening discussion. He mentioned that the oil prices are great, that we took a little bit of a downturn last week, but they are still fairly robust and we should encourage the technology that our Institute has been working on.

Commissioner Williams pointed out that the Bureau of Land Management has come out with a proposed Resource Management Plan for the Bighorn Basin that creates what they call a balanced situation where they are preserving more land but are still going to allow some oil and gas development to occur where it's already occurred. It is out for public comment right now. He believes the Commission should draft a position statement as part of that public comment process and maybe encourage the pipeline authority to do so as well to ensure that nothing the BLM does would preclude the ability to get CO₂ into the Bighorn Basin to be used in the existing fields so that a situation isn't created where they try to run a pipeline through whatever means. We are finally able to run a pipeline up there and you may find out that we can't do so because we have preserved the soil, this 50-mile stretch east of Cody as a defacto wilderness. He didn't think this Commission ought to get involved with lobbying the federal government but a statement from the Commission about the potential value of EOR in the Bighorn Basin would be important. He thinks we have good numbers for the potential barrels. Further, we can add a statement to the fact that emerging technology, with regard to residual oil zones suggest that the numbers we defined in existing fields could, in fact, be 50-100% greater than what has been defined by past technology. That kind of a comment from this organization probably needs to be submitted to the BLM relative to the Resource Management Plan. He thinks it is an important enough issue that we ought to be part of it.

Commissioner Fitzsimmons explained that the preferred alternative out for public comment right now tightens the ability for us to further develop resources within the basin, not just exploration and greenfield development but brownfield work on existing wells and infrastructure. He agreed that if there is indeed a desire to bring CO₂ into the Basin, there would be significantly more cost to do it under the preferred alternatives. He completely agreed that we have a position specific to EOR and the ability for the producers to develop the mineral reserves with this technology. We need to be able to express that to the BLM. He believes the comment period deadline is mid-July.

Commissioner Bebout explained that the legislature spent much time trying to put tools into the hands of those people such as County Commissioners who go to those cooperating agency meetings at the BLM to talk about what you go through with the economic impact, what it does and how the economic analysis is a tool. He thinks we need to make sure we aren't overstepping what we are set up to do. He believes it is an important issue to be a part of and the Commission should take an active role in the comment process. The RMP is a controversial issue and the BLM is trying to figure out a way to use CO₂ in the Basin, but on the other hand, trying to prohibit it. He felt that we need to respond as soon as possible and maybe even have some people go to the meetings and educate the people in the field. The BLM have their experts at the meetings and it's difficult for a rancher or businessman to maintain their position. He thinks we should prepare a comment and also to testify to let our position be known and be very aggressive. He feels that it should go further than the Bighorn Basin RMP, that we should look at all RMP's, take an active role and help these people who are there trying to do what is right for their counties. Not only Big Horn, but the County Commissioners from Park, Bighorn and Washakie have been working together; maybe even get Hot Springs on that RMP to achieve some results. The preferred alternative doesn't show that they have been able to do that.

Director Mohrbacher added that we were invited to participate in the committee for the Denbury pipeline and he ran that by Mark and he said it looks fairly time consuming. He inquired if they thought it has importance. He hadn't thought about participating as part of the EORI but we were invited.

Commissioner Bebout responded that participation in NEPA projects is probably different than getting involved at the RMP level. He believes it is more important that you don't create a RMP that will preclude us from being able to get to this enhanced oil recovery in the Bighorn Basin. At a point and time that operators determine it's effective we can't dictate or affect their economics. He believes it's important that we at least go on record as saying that there is a lot of potential there and with immersing technology that potential may be 50% or 100% higher than we had originally estimated and that they need to consider that in their thought process.

Commissioner Bebout motioned that we draft a letter to the BLM to submit as part of the public comment process for the Bighorn Basin Resource Management Plan, seconded by Commissioner Williams. Approved.

Commissioner Fitzsimmons commented that he has a draft letter that he has for his staff that he could send to Director Mohrbacher, a template to build off of.

Commissioner Fear added that from a past county commissioner's standpoint in Sublette county, they need all of the help they can get from any outside agency. She thinks the commissioners would welcome any help.

Commissioner Hinckley suggested using extreme caution. Over the history of this Commission we have correctly tried to maintain our focus on additional recovery of oil in the field. He

reminded the Commissioners of a discussion early on with Hank T. and Tom Stroock of the Commission, about the debate over whether to include environment, ecology or something similar in the mission statement of the Commission, and it was rejected. The point that was made was that part of the constituency for what we are doing here is environmental. By virtue of going into existing fields we are increasing the take per unit of environmental impact and he thinks that is an important concept that we have supported. That isn't to oppose the motion but just to say, let's be careful that we keep our focus on what we are doing, which is additional oil from existing fields rather than becoming a full scale advocacy for the oil and gas industry statewide. So if the statement were worded quite carefully towards that we wish to bring to your attention that there are emerging technologies which will allow us to increase oil production in existing fields, which should be taken into full account as we are putting together our RMP's for the next 10-20 year plans that is something he could support.

Commissioner Bebout added that we could possibly put some important objective information to the BLM to allow development of EOR over the next two decades. We need to request that in the preparation of their RMP and their final decision on a preferred alternative that they not preclude EOR, which is an extremely large part of the oil production in the state of Wyoming.

Commissioner Fitzsimmons pointed out that the EORI staff is a good authority to evaluate objectively and offer those values for the RMP response. He also agreed with Commissioner Hinckley that our role is more of getting what we already developed, the technology and resources we have and keeping to that scope.

Chairman Wold said he thinks we can do that, and requested that a draft be worked up and the language be sent to get started. He added that a press release was sent out in March which took a long while to put together. He would like to see this get expedited this time. He suggested having a draft by Friday, May 13 to stay on top of the deadlines and we'll circulate it.

Commissioner Fitzsimmons explained that the preferred alternative really accentuates the wild lands designation. As an example, we have a field that is almost 100 years old, fully developed in terms of well count and the wild lands designation would include development for CO₂ in that particular field because of the view 30 miles away is Frank's Peak. We can't move mountains. Grass Creek Field has probably a couple hundred million barrels of recoverable oil. So, we are advocates for the state. The language has to be written properly about how the Commission is concerned. Everyone on the Commission will see it before it goes out.

Chairman Wold explained that the letter can respond to the Bighorn Basin RMP but that it can also say on a more general basis that the work of the Institute pertains to all of WY.

Commissioner Fitzsimmons suggested that maybe Director Mohrbacher could see what other RMP's are out there, to see there are other situations that are similar. For instance, the RMP for Fremont County would not let them put a cell phone tower on an obscure butte out there so we could have coverage and they couldn't change it. The preferred alternative now is not going to

allow it again, so in the next 20 years there isn't going to be any cell phone coverage in a big part of Fremont County.

Commissioner Hinckley responded about the press release comment, how it goes back to our earlier discussion. The Commission is the Commission. We can do whatever we please and we can issue a press release without the University having to give their approvals. He suggested that here is one place where we can begin this process of being a Commission that operates somewhat independently of the University. Let's put together a comment and submit it.

Commissioner Bebout talked about a student from the University, Mark Newcomb, who has done a lot of work with CO₂ in our state. He saw an email because of the minerals committee, maybe a thesis that addresses the overall big picture to the state, how we can get CO₂ and continue these kinds of things. He felt it would be worthwhile to maybe have him make a presentation to this committee or at least look into what he is doing or see his work and maybe submit a report to all of us.

Chairman Wold reminded the Commissioners that we had an action item to get Brian Jefferies here to make a presentation as to what they are doing with the pipeline.

Commissioner Hinckley suggested that Director Mohrbacher remind them of the evolving relationships with CO₂ sequestration and CO₂ delivery, how he would describe where we are with Pipeline Authority and who is covering that base. They are getting data from us, as well as information regarding where we see demands.

Director Mohrbacher said that Lon was managing that relationship. He got his update during the last Commission meeting and suggested that we take a look at a more aggressive approach, possibly helping them determine what a maximum size of the pipeline should be. His concern is that if an individual company does it, they may think about their own personal interests over the State's. We were trying to come up with a strategy where everyone could have access with carbon dioxide and not have one company get a corner on the market and take advantage. We will just continue to work together. He said that Chairman Wold tasked him with becoming more involved and said that one of them or both should attend the WY Pipeline Authority meetings.

Chairman Wold discussed the importance of having good interaction with the Pipeline Authority, SER and the Board, as we have to work with them all. That was the reason he wanted to have Brian Jefferies scheduled to come visit with us. Mark Newcomb was going to come to this meeting but he had to cancel. Good communication is important. He would like to have Brian give an update of the initiatives that the Pipeline has.

Director Mohrbacher posed the question of how to keep CO₂ in the State. We are building pipelines to transport it out of the state. We talked to our economics people at UW about the need to understand what the economics of the fields are in southern Montana, so that we can see

what advantages they may have. Is it an advantage that they acquired the company that is transporting the CO₂ to those fields and does that provide the incentive, or are they really making a larger return transporting the CO₂ there? Once you know what the delta is, they are at a disadvantage because they have to transport further, we know what the incentives are, or what types of fields we need to look at in Wyoming and keeping our resource here. That is valuable information for the legislature, for SER and for a number of people. Owen Phillips with the Economics Dept thought that was a good idea and moved a different direction than we have in the past with the Wyoming Pipeline Authority. We are competing for use of our own resources.

Glen Murrell reminded the Commission that we have already done a lot of work with the Pipeline Authority, that he, Brian Jeffries and Brian Reyes, have put together a report quantifying the resources throughout the State and off of the pipelines. That presentation was made to the joint minerals development committee in October 2009. We have a lot of those numbers. Having spoken to Ben Cook just last week, some of the new work that we going to be doing is to refine those numbers even more.

Commissioner Bebout announced that the EPA is trying to treat EOR tertiary recovery as the same as carbon sequestration and to have it come under the EPA and the rule making process. If you have an issue with the WY Oil and Gas Commission as they do the Class 2 type permits; DEQ does Class 5 which is for underground injection permits. You could have a situation where, if these rules start saying that EOR tertiary recovery will be treated the same as carbon sequestration under the EPA that opens up some whole new difficulties. This is an ongoing thing and the Commission needs to be aware of that. It is a pretty serious rule that they are proposing.

Commissioner Hinckley inquired about where it could possibly go.

Commissioner Bebout responded that if you wanted to do a tertiary recovery instead of going through the Oil and Gas Commission under Class 2 and allowing them the MOU, that we, with EPA Region 8, they will say no Region 8, that you will go to region 8 in Denver. You would probably have to permit a Class 5 underground which means you could go to the DEQ but that could present problematic issues. It would be an EOC permit.

Commissioner Williams explained that what EPA has actually done is create a new class, a Class 6 for CO₂ injection. So far, they have acknowledged that EOR is, in fact, separate from strict sequestration for permanent storage. So far, it isn't passing.

Director Mohrbacher said he went to a technical meeting and met some people from AEG Insurance. They were there because they provide environmental insurance and see a huge market related to insuring carbon sequestration projects because of who owns the liability if the CO₂ leaks out? The EPA is going to assume if you don't have positive data that indicates it's not leaking you can't do it. It could be problematic; it depends on what kind of protocols they create for regulation.

Chairman Wold responded that is part of the rationale for us to send a letter in response to the Bighorn Basin RMP.

Commissioner Hinckley inquired about the Commission's website. Director Mohrbacher responded that it needs updating and that EORI can do that. The EORC website is currently under the university's A-Z Directory.

Glen Murrell from EORI addressed that in the past there has been a separate Commission website page. We considered merging it into the Institute's website as a page or series of pages but we couldn't do it. He wanted to ask if anybody knows a reason why it has to be a completely separate website.

Commissioner Hinckley responded that the EORC website shouldn't be represented as part of the University but there ought to be a link to it. Right now the EORI site does not mention there even being a Commission. He thinks there should be a separate page or corner that would be for the Commission that would have our agendas and membership and how to contact us.

Glen Murrell stated that we have our hands tied as to how a UW website looks. If we build a Commission page or series of pages within the EORI website it will have the UW's main banner across the top of it.

Commissioner Fitzsimmons stated that it's critical, when we talk about an RMP for the Bighorn Basin that we talk about it as a Commission that we are willing to put our statement on a website so that when a citizen can see it when they go to our website.

Discussion followed about possibly having the State host the EORC website.

Motion by Commissioner Fitzsimmons to set up the EORC website through the State, seconded by Fear. Approved.

Break.

IV. Director's Overview- Mohrbacher

We talked a little bit about how we work for multiple parties and I put this in, most of you have seen this before but those of you who haven't, we are drafted through you by the Wyoming legislature, we work for UW and we provide value to the producers and they are remarkably important. We basically have to keep three bosses happy. The continuum I put in the bottom, because we have had a lot of discussion about academic support and really EORI is in between the University, we are not educators like the University is, we have no graduate student support. We have graduate students through professors but basically that is through sub-contracts. We support the operators but we are not doing their work for them. We are doing innovative work that can be scaled to other operators. Sometimes there are shades of gray and that is when we

come to you and ask for help. I always use the example of Shaochang Wo, who is sort of skewed towards the University and I am definitely skewed toward to operators and where we all want to meet is in the center so we can accomplish our objectives. What differentiates us? I have been working on this question for a year and it finally became clear to me after my last meeting with Myron Allen. What we are tasked with doing when we go to the field and demonstrate technology is that we have to implement a multi-disciplinary approach. We need many disciplines that we integrate into our solutions and into our projects. I looked around the University and tried to identify other multi-disciplinary teams, doing field work and I came up with SER, Mark Northam and Ron Surdam with the CO₂ Sequestration. This is a lot different than academic research. Professors work primarily on their own. We have to have team work and what I have tried to do this last year is put the tools in place so that we can create a culture to achieve this goal. We are a changing culture that is stressful for a lot of people. We have seen some of that response in the turnover in the last six months. We have created an organization where before it was Jim Steidtmann in line with everybody else, we now have groups. We encompass simple tools. People like Glen were following the protocols we developed, we were doing it when I got here but not everybody was. We have to have a uniform way of approaching it.

What's our focus? We have changed our focus this year. We were doing a lot of different things when I got here and I'm not sure we were terribly effective with some of them. Some of them we were. We have changed our primary focus to look at Tensleep and Minnelusa. Once we get a handle on those opportunities we would like to move into the carbonates in (?) and the Madison. Between the Tensleep and the Minnelusa we have well over 50% of the potential EOR reserves in the State that we are looking at. If you add the (?) and the Madison we will have over 80% of the potential reserves, especially if you look at ROZ like Bruce mentioned, the residual oil zone which could increase reserves by more than double. We are going to keep 20% of our effort focused on small operators. Small operators is a relative term, I'll give you an example, and we just started a project with Timberline that Glen is working on to help them develop the Morrison formation. It looks like a great candidate for EOR, it's relatively new in its history, its producing 100% oil, they injected water for a period of time and I'm not sure they really saw a breakthrough, but just a perfect time to implement EOR. Basically Bruce and his partner, they have some oil experience, but they could definitely use our help. That is a new project we have generated, we need to continue doing that. The other thing is that all of our efforts should focus on achieving our objectives so we have direction. You will get to look at our strategic plan today. We need an organization, a culture that allows us to get to the fields. We will talk a little bit about how we changed staffing and how do we get in field demonstrations, which is much different than working in the lab.

What are we doing to benefit WY? Basically we can say that we are going to generate barrels of oil in a tank within reserves booked. It took 3 years but the project finally booked and we had a million barrels of reserves and just with that war on the severance tax that is a benefit to the State

of Wyoming and there are indirect benefits as well. Another thing that we have done is attracted new business to Wyoming. I can start with Denbury Resources. Denbury got to know Wyoming through the CO₂ conferences, through contacts with the Institute. Now we have LINC and Carbon Energy which are two coal companies that could be substantial providers of CO₂. Now they have realized that Denbury's business model doesn't look so bad and they are in the acquisition for floodable reservoirs. DPRW is kind of looking backward and saying how we can use our CO₂ instead of selling. That is all really good for Wyoming. We've got another operator we are going to talk to in Oklahoma. We encourage investment not just by creating projects, but by doing our research. Co-investment is not something we have done a lot of; however, we have done it in the past. With the price of oil at \$100 a barrel and people being able to generate millions of barrels of reserves, they are going to make money. It would make sense that they would help us fund some of our work. We could take that \$2.8 million that we get every year from the legislature and extend it by some multiplier. That's a big difference from what our outreach program has included to date. There was a feeling before I got here that we didn't want co-investment or that investment in kind was sufficient. Maybe companies go out and do a couple of lines of 3D seismic and that is contribution in kind. The reason I am interested in the co-investment is that it gives me an ability to add staff and show credibility to the legislature that people are willing to put money into our efforts. Companies are a pretty good judge of what a good investment is and what's not.

Commissioner Bebout added a comment that it is so important because our revenues are shrinking as a State and even though we are better off than a lot of states, there are going to be some hard decisions that we are going to have to make in the legislature in the budget session and it's always about how do we show the results. The results are really measured in tangible things, barrels in the tank. If we can show that, we can show it makes this program head and shoulders above a lot of them.

Chairman Wold mentioned that the press release we sent to the legislature was an effort to try and do exactly that. Co-investment is not a new theory. That is something that we have encouraged, tried to nurture as much as possible.

Director Mohrbacher said it's true that we have talked about it, but our EORI outreach efforts haven't pursued it. If we make the companies money then they should invest in our efforts.

Technology transfer - We assist Wyoming operators with evaluation and design of a number of things, from innovative ways to look at the formations to simple water flood optimization. Tom made the comment, and I think he is right, that if all we did is water flood optimization we justify ourselves based on increased taxes to the state of WY. There is a lot of opportunity out there because of the increase in the price of oil.

We are going to continue to support our small Wyoming operators. We will start an initiative in the Bighorn and Wind River Basins to help implement EOR in the Tensleep with Tom's help. I

appreciate Tom's help and patience with this effort. EORI continues to grow our capabilities and we are looking for ways to better describe natural fraction in the Tensleep reservoirs. We plan to create a consortium much like the Minnelusa consortium in the Bighorn Basin.

We've been very successful with our consortium of three companies in the Powder River Basin. We want to find ways to scale that as well. There are two fundamental ways we can do it. We can start another consortium with different companies and expand the existing relationship we have with the three companies we are working with.

Last of all - Technology transfer. My idea is to take that out of the hands of outreach because I think we need technical people doing the work. We need to do some benchmarking and target our efforts and we can do that through our senior technical staff because we are basically the first line of people on the organization chart of group leaders and we can actively pursue that.

Commissioner Bebout asked what the natural fracturing initiative is.

Director Mohrbacher explained that it is something we have created specifically for the Tensleep Formation. When we were selecting our targets, we found out we had detailed information from eight different Tensleep reservoirs, outcrop and sub-surface data which is of great value to industry. We summarized that information in a report. Number two, we have Peter Hennings on our TAB, and this is his expertise. He works with an associate professor at the University of Wyoming named Eric Erslev. They predict what fracture orientation and intensity are, so we can improve our reservoir models. There are a lot of new tools that we haven't really utilized in Wyoming and in the Tensleep, including micro seismic imaging and various seismic techniques. What we need to do is just target a formation or an area. We have been looking at Braning because we had so much public information and it overlaps with the ROZ development. Once you see the pictures of Braning and the potential volume of the residual oil zone, it is an order of magnitude, larger in volume than historically produced. Braning is a good size field but the potential size of the ROZ may be ten times bigger volume wise. We think we have got limited data to indicate oil saturations, may be the same in the ROZ as in the depleted historical produced site. We need to understand fractures and how we are going to characterize all of that new reservoir volume and come up with strategies of how to do CO₂ working with the operators. Working with the target, it looks like it could be big. The folks in west Texas have seen it and they agree and they are doing it, concepts and improvements so it's pretty exciting.

Commissioner Fitzsimmons inquired if we have signed the deal with Merit on Frannie.

Director Mohrbacher responded no, Merit told us that they were selling it to Whiting and he was waiting until we got something more substantial put together. Merit is still listed as the owner in the Oil and Gas Commission database but that database could be out of date.

Commissioner Fitzsimmons indicated that the only reason he brought it up is because it goes back to the issue related to what is confidential and what isn't and this is yet another project that

Merit is involved in and he thinks going forward we have to communicate to them that their name might come out.

Director Mohrbacher: What is our technical capability? These are our historical capabilities. I'd say we are very strong with geology or modeling, but not engineering resources, so we hired our first engineer right out of school, a strategic hire. What Reza brings to us is his ability to look at conformant, production optimization, and ultimately we are going to develop the ability to help plan, implement and evaluate field demonstration. We will never run them because the operators will have to be responsible for them, but we can support them and between Shaochang, myself and Reza, we will build engineering capability fairly quickly. It takes much longer to get things done in a University environment than industry. Cultural change takes time, so right now we have Reza working with Shaochang and that is going well. Reza can move into the field fairly quickly.

Outreach - We have a pretty substantial backlog of existing projects. We have over two years of work and more if ROZ takes off like we suspect it will. We can easily keep our staff busy based on the evaluation of the Tensleep, the Minnelusa and our small company initiatives and the research that we are doing.

We are going to continue to support our conferences. We have two conferences a year, one in July and one in September, they are well attended. Workshops, we were doing workshops and it was mandated that we do workshops until about two years ago and we stopped. Our strategy from last year was to bring our efforts back in the State and spend our time here in Wyoming talking to operators rather than going with our outreach program to New Orleans or Houston. Our technical people can do that. I would really like our outreach efforts to be meetings in Cody and Casper, working on specific benchmarking technology transfer initiatives. That is a big change in direction for outreach. We have great name recognition, we have been very successful in bringing outside companies in. Carbon Energy is an example and we met them at a coal conference through SER. I introduced them to Glen and they are now a player looking at acquisitions in Wyoming. I feel strongly that we don't need to spend as much time going to the operators out of state as we do talking to the folks in state and make them come to us.

We will continue to maintain key relationships with our partners, Merit, Osborne Heirs and True were mentioned and there are others who have an assigned project director who will take care of the business part of the business. Glen and I have served in that capacity for a lot of our clients. Every project will have a technical project manager, that person makes sure the technical team is coordinated, we know what we are going to do, make sure the schedule is reasonable and we have a good staffing plan and we accomplish the work. That has been one of our challenges in the past, we commit to too short of a schedule, we are understaffed, the scope is not well defined and we struggle. I have seen it work in other places and industry does this all the time. They have one technical person who directs the work. Shaochang is the project manager for the Minnelusa.

Staffing - We have increased our staffing numbers within our existing budget. In fact, when you see the budget you are going to see that we are almost \$600,000 underspent this year for a number of reasons. We have added two staff people net this year. We have two key senior positions open right now. We have candidates identified for both positions; we just need to get through the University process.

Chairman Wold asked who the second staff person besides Kathy is.

Director Mohrbacher: We have hired Haifeng who is a chemical/petroleum engineering post doc. We hired Kathy to replace Julie. We have a candidate to replace Mark and then we have a 3rd position that we are replacing, which is another modeler. That is three modelers and we will have four modelers by the end of the year when we recruit a PhD to work with Shaochang.

Chairman Wold asked if he plans to do the outreach himself.

Director Mohrbacher: We need to replace our outreach manager; there is just too much work to be done. I think the role is going to be different. I would prefer that our technical people be our spokespeople. I'd like Shaochang and Glen to become better known within the state of Wyoming. We have the name recognition right now. We might hire a more junior person who can help us keep up with our contacts and does the service work. I really think that we are mature enough that we are going to be able to maintain our momentum and sustain our work and grow it without somebody out there selling. What I would really like to do is have somebody who understands schedule, scope and staffing so that we don't end up with conflicts.

Chairman Wold indicated that from his perspective, whoever they are they need to have presence in the State of Wyoming, whether it is in an international conference or not. The folks that we want to be dealing with are with the people who have the presence here. The other concern he had was that he worries about the Outreach. The outreach was done very effectively by one person who was able to get out and speak on behalf of the overall Institute and the work that is being done. He didn't know if we are going to get the same kind of outreach message distributed if there are 3-4 different people trying to do it.

Director Mohrbacher: I don't think we will have 3-4 people doing it I think we will have 2-3 which theoretically you had before. You had the Director and the outreach person. I'd add Glen as a deputy director so we could have 3 who would work closely together like I do with Mark Northam. We are flying to see Chesapeake Friday. I am more than comfortable in that role but I don't have time to do it all so we will need an Outreach manager. I just don't know if it will be the same package that Lon provided.

Chairman Wold: I thought I heard you say Peigui and Shaochang and so forth. I don't know that they would be the type of people that would be able to bring industry into participation with the Institute.

Director Mohrbacher: That is not what I meant to say. There will be a project director and a project manager associated with every project. Shaochang and Peigui can be PM for projects.

Chairman Wold: Those guys are brilliant but I'm not sure they are the recruiter type of people.

Director Mohrbacher: Exactly. If we need a sales person we can get one, someone who is very well networked, goes out to dinner all of the time. I would rather have a remarkably strong technical person which I also think Glen is and we have others, putting our packages together. When we talk about our challenges, one reason we can't reschedule is that our TAB group told us that we are not allowing enough time to get the work done; we shouldn't be staffing with faculty if we want to meet deadlines. We need quality and that was all folded in.

Commissioner Fitzsimmons: Dave, just for clarity, I too misunderstood that you mentioned a junior person would be coordinating workshops and facilitating those meetings. That was not your intention for that person to be the outreach manager, but more of a facilitator or coordinator person? What did you mean by that junior person?

Director Mohrbacher: I look at Mary Burns as a model. Mary works for SER as their Director for Outreach. She organizes and coordinates. Mark Northam, Ron Surdam and others generate the relationships.

Commissioner Hinckley: Is SER involved in that kind of outreach? It seems like they are doing a lot of integral stuff like grants and contracts and for professors to do research.

Director Mohrbacher: You are right, it is different, but when we get the Center for Energy Research in place we are suppose to be developing partnerships with them.

Commissioner Hinckley: I like that idea of someone calling Merit every two weeks, that keeps you connected, and it has to be somebody that can relate to their issues. I don't see that as, I know Mary is a wonderful woman, but that is what Lon did well. Is that you?

Director Mohrbacher: There will be a project director assigned to every client so that would be me, but I can't do it all.

Commissioner Fitzsimmons: Is it fair to characterize that maybe we don't need a project originator as much as a person to maintain the relationships that we have already cultivated? More projects right now won't necessarily be helpful to our work.

Director Mohrbacher: What I expect to happen is that the Bighorn Basin should generate 3-4 sizable projects.

Commissioner Fitzsimmons - Back to my question then, is that your vision then, in maintenance of relationships rather than cultivation?

Director Mohrbacher: Maintenance of relationships and creation in a different way, creation through workshops.

Commissioner Fitzsimmons: Just for clarity, when he says my guys in Cody, there are 6-7 operators who are producing from the Tensleep in the Bighorn Basin that we have reached out to. They aren't my guys.

Director Mohrbacher: I'll be careful of that Tom. Tom helped us put the group together. You are what I would call a coach.

Commissioner Fitzsimmons: That is why I am asking the question, I think as Directors we have somewhat of an obligation as being part of this Commission that goes beyond just meeting quarterly and if there is some burden that we can take on that we might be able to offset what you are describing to me. We might be able to keep maintaining the relationship in the Tensleep in the Bighorn Basin with the operators that I work with on a daily basis. It seems to me to be more effective because I already have leverage. They are wanting to buy assets from me, I'm wanting to work together with the same group that I meet with every Wednesday.

Director Mohrbacher: Thank you. To put it in more concise terms, I would like to use a team approach for outreach and work closely with Glen and I to do it. If it sounds like I don't have a perfect description, I don't. I haven't figured out what the solution is. I just know it needs to be different than what it was a year ago.

Commissioner Hinckley: That difference, how do we characterize that difference?

Director Mohrbacher: We were limited by having one person.

Commissioner Hinckley: The other threat in there that I don't want us to lose track of, is that we tend to think of it as projects, say that we were consulting where you and I come from. We are generating, something that you can bring home and it will keep five people busy. But the beauty of our program is that real success would be us being able to promote a project that takes wings and flies away to where we don't have any continuing staff to deal with it at all. That kind of leveraging so that we can put together a group of operators to demonstrate that there is a project available to them and they could farm it out to the existing petroleum engineers or the consulting crowd. I'm a little reluctant as we continue to characterize things as terms of bringing home projects as though we are a marketing job, really a whole other side of outreach can be one that doesn't come home.

Director Mohrbacher: They need to have a better idea of how to train their staff and hire consultants. The whole idea of benchmarking and technology transfer being run by the technical staff makes sense to me. I don't think that is an outreach function. How we develop strategic relationships and maintain our partnerships is outreach.

Commissioner Williams: If I think about a company, I maybe think that I'm having some trouble trying to reach the distinction of the small companies versus the larger companies, but if I think of a company like Merit, structurally they are organized as such that you've got a manager over many things and that might be Chris that is on our Technical Advisory Board. Then he has underneath him specific reservoir engineers working on various projects. Maybe they are Lost Soldier, maybe a Kim, maybe a Minnelusa. It seems to me that it makes sense that you have got a corresponding person, a technical person within your organization who works with that guy at Lost Soldier on the conformance control and another one that maybe works on what's needed for the chemical part and a third one that works on Minnelusa. That makes sense to me that you have technical people, the Shaochangs, and the Geoffs, the guys doing that. It makes sense to me but at the same time there has to be somebody in your organization who is communicating with Merit's organization up to Chris. That same line has to exist within EORI and then you have to have a person that is communicating with Chris, who is not any of those technical people. That is, and I am just going to say a Lon, not that Lon is the master of all of these projects, but that somebody needs to be, so that when Chris says, my chemical guys are really mad because we haven't got the deliverables that you said you would get; that communication is not going to the guy that missed the deliverable, it is going to somebody else in the organization that can cause it to happen. That is my vision.

Director Mohrbacher: That model will work. Glen fills this spot right now; he is taking care of Chris.

Commissioner Williams: When you think about replacing Lon, Glen has that responsibility of doing that, but then who is Glen also doing the outreach to? I'll pick the name Whiting because you mentioned it and that is creating that same relationship with the Chris at Whiting.

Director Mohrbacher: I manage the Whiting relationship.

Commissioner Williams: No, you are missing my point. Let me take the Whiting name out of it. Another company out there that has operations in WY to do something. Is that the same group of people here? Is it you and Glen? And if it's you and Glen that is going to do all of the outreach, is that enough people and if it isn't, then you need another guy that is more akin to you and Glen than to these technical people, and it isn't a junior guy.

Director Mohrbacher: I agree. It should be someone very seasoned; it could be somebody that just wants to come back to Wyoming. That makes sense.

Commissioner Williams: That is what I am struggling with. This concept of the technical guys being the person that are going to get in the door and explain what has gone on in the Minnelusa consortium to the person that you are recruiting for the Minnelusa consortium to, that isn't going to be that technical guy. It has to be somebody who has the big picture view of it and can sell that story. I also hear you say that we don't need a salesman but I think we need to sell this story

to those other operators, I think we need to sell this story to the legislature, I think we need to sell this story to the Governor. I think we need to sell this story a lot.

Commissioner Fitzsimmons: If I could just build off of what Bruce is saying, I have often struggled with what is the best role for our organization because we have a changing industry. The last few years, probably the biggest change with the credit crisis, is that even big companies that would normally generate projects like this in house and implement them, go out to a third party consulting firm and if I can use the Minnelusa consortium as an example, EORI did a wonderful job in bringing in the three partners in that consortium and putting barrels in the tank that are measurable. With that success we want it to be able to take off with that specific technology; we don't want to have to do that project again and again because we become competitors to third party consulting firms. What we really want to do now that we have gotten it this far is have that kind of technology transferred to those services providers that can multiply that impact as we develop the next project. So, as much outreach as we have in originating projects, as we have in implementing projects we have to have an equal amount of outreach in extending and transferring that technology to the people who are going to develop those reserves for future projects. We should never have to repeat a project that we have done once already. That would be most ideal, that we just see it take off because we have effectively proven it up at the start and then transferred it to those that are going to take it to the end users.

Commissioner Williams: The problem I see with that is, part of what I think was envisioned in the whole creation of this thing was that you have invested some State money in providing expertise that these people couldn't provide themselves. Now to say, okay we have done it for the first guys on the State's nickel and now Tom, when you want to do a Minnelusa program, you need to go hire x,y,z consulting company to do what we did for this guy on the State's money.

Commissioner Fitzsimmons: I look at the State's contribution and I say that is another partner that is risking a couple of million dollars in capital each year to develop reserves. They don't want to see these projects repeat themselves multiple times so that they are risking their cash and that is where I am driving at. We have to have as much effort in having those subsequent projects take hold and move on without the input of our limited workforce because if we rely on repeat projects to always come out of our shop we are really not doing what that risked capital is intended to do early on.

Director Mohrbacher: There are a couple of approaches that we have followed. One is that we can do initial studies and models and we can calculate oil recovery. And the small operator that owns the field takes it to a larger operator that has the financial wherewithal and the technical skills. They have used our earlier studies to do that. I think if we have workshops and teach people the skills they need to develop EOR, the state and the operators can benefit. When we talked about performance improvement with the Minnelusa consortium folks some of the senior

people didn't know what we were talking about. To tie this up, Bruce, if I find the person and don't call him junior and I call him senior would that be acceptable?

Commissioner Williams: I don't know if you need to define acceptable, I was just trying to explain how I understand it worked. I'm not saying this is the model. All I was trying to do was take a single example, being Merit, that had multiple projects and it may be that when you deal with the company you mentioned that I hadn't heard of, when you deal with them it may be that your technical guy is that outreach person. I don't know. The whole concept, a junior person to me I think of a 5-6 year out of school engineer as being a junior person and I'm saying I don't think that is what you need. That person won't be able to get in and communicate with the Chris'. That's all I'm saying.

Director Mohrbacher: We can expand our available resources. We were talking about Tom helping us with identifying operators in the Bighorn. We can do the same thing through the University relationships and through our TAB members.

What are our challenges? Some of our projects, especially those that are a little more complex and require laboratory work, that we have struggled with meeting schedules. We are implementing peer review. Industry folks are seeing 8% per year raises and our folks have seen zero for 3 years. I know that the one person who left got a substantial raise when he left, something like 40%. We need to find ways to retain folks. Money is not the only way, professional development is another. We are improving our coordination within the University and I am working real closely with Department Chairs. Both Art Snoke in Geology and Geophysics and Bagley in Chemical and Petroleum Engineering have been helping us work with faculty.

V. Old Business

There was no old business at this time.

Glen Murrell Project Update

Dr. Murrell began by updating the status of all External Projects. The Minnelusa Consortium continues and work is currently focused on dynamic simulation and history match of the second reservoir in the consortium. Progress is good and considerable cooperation is taking place between the EORI researchers and the operators.

The CO₂ Foam project is progressing and the lab is going through the pressure testing phase. Flooding is scheduled to begin by the end of the month. The Chemical flood project is progressing well with a second blend currently being tested. An on-going full field Muddy Reservoir dynamic simulation is progressing ahead of schedule. A heavy oil project is in the evaluation phase but low on the priority list. Eleven individual screening reports have been completed.

Internally, the Big Horn Basin ROZ evaluation is progressing well with exciting results. A natural fractures initiative is in the formative phase but gathering momentum. Low salinity water flooding is nearing completion and final reporting. The EORI Reservoir database has undergone a complete rebuild.

Glen then outlined prospects. There are several external prospects. There is potential to extend, expand or duplicate the Minnelusa consortium. Selection of operators needs to be done with a transparent and fair system. A Tensleep consortium is in the embryonic phase. Several other full-field simulations and/or studies are being considered with True, Elk Petroleum and Citation but are low on the priority list. Several screening projects are in various stages of development with Enhanced Hydrocarbon Resources, LINC Energy, and North Finn / Sunshine Valley Petroleum.

Internally, designer water flooding is being considered as a future program in the Core Flooding lab. Several workshops are in development relating to conformance, fracture studies and water flood optimization. Ben Cook of the UW Economics department is developing a RFP to finalize his work on scoping models, pipeline infrastructure and competitive economics. Several benchmarking activities have been identified and need to gather some momentum. Several state-wide and basin-wide screening initiatives have been identified and pursued.

Glen outlined results for the last year. There are several quantifiable results including 4MMBO of reserves booked. An average of one CO₂ EOR deal per month being announced since January, and \$100+ M of investment. Intangibles include tremendous knowledge sharing through the screening program, increased operator awareness and enhanced networking.

VII. New Business

Commission Support (0.25)

Summary of Q3 FY11 Spending

Annual Summary of EORI Results

Annual Update of EORI Strategic Plan

New RFP Process for Department Support

EORI Staffing

Staff Retention

Summarized by Director Mohrbacher

Commission Support (0.25 FTE)

A brief conversation was completed regarding support of commission activities. Kathy Olson, the new EORI Office Manager, will hire staff to transcribe commission meeting minutes. It was determined that EORI would recommend a list of media relations support people, that are located in Casper, to assist with press releases and responses to the media on a part-time basis.

Summary of Q3FY11 Spending

A summary of EORI spending through the third quarter of FY2011 was presented. EORI has underspent its budget for FY2012 by approximately \$500K. Two categories account for spending being less than budgeted including hiring of new staff taking longer than budgeted, and less than forecasted spending on field demonstrations.

Annual Summary of EORI Results

The summary of EORI results will be presented at the July EORC meeting.

Annual Update of EORI Strategic Plan

The updated EORI Strategic Plan was presented to the commission. Strategic objectives are defined for the following categories: Culture, Outreach, New Building, Technical Program, and Staffing. A brief summary of changes to each follows.

Culture – Investment in team building will continue. At least two off-site team building sessions will be completed during FY2012. Empowerment of EORI group leaders and staff will be implemented. Metrics for empowerment include: development and management of group budgets by group leaders, participation in staff planning and recruiting, generation of professional development plans, and management of training.

Outreach – A new EORI Outreach Manager will be hired. A job description has been generated. A senior person with business development skills will be recruited to fill the position. Work on technical workshops will be restarted after a new outreach manager is hired.

New Building – Five EORI staff will support construction of the new Energy Research Center. Construction of the building will be initiated in the near future. EORI staff will move into the building during FY 2013. Laboratory equipment for the EORI lab will be identified and budgeted.

Technical Program – EORI has continued to focus technical efforts on the following areas:

- EOR application to the Tensleep in the Bighorn and Wind River Basins (30%)
- EOR/IOR application to the Minnelusa in the Powder River Basin (30%)
- EOR/IOR application to reservoirs managed by small Wyoming operators (20%)
- Research related to low salinity and designer water floods (20%)

Note that the targeted allocation of EORI resources is presented in parentheses for each effort.

Evaluation of residual oil zones (ROZs) has been added to list of strategic objectives for the coming year.

New RFP Process for Department Support

EORI will request that faculty provide the following for EORI supported work during the coming year:

- Definition of research objectives,
- Brief description of the proposed scope of work,
- Definition of milestones and work products,
- Budget for labor, equipment, and materials to complete the defined scope of work.
- Schedule for achieving milestones and providing work products.

It is anticipated the requested proposal will consist of 3 to 4 pages of text, one cost table, and one Gantt Chart.

EORI Staffing

The new EORI Office Manager, Kathy Olson, was introduced. She was hired during May 2011.

EORI is working to fill the strategic technical positions:

- Senior modeler, and
- Senior geologist.

Candidates for both positions have been identified. Interviews and hiring are anticipated to be completed this summer.

Glen Murrell Staffing Update

Glen started by addressing turnover during the past year, listing Mark Tomasso, Julie Hamilton, Laura Rehmeier and Lon Whitman as employees who have moved on and Reza Barati, Haifeng Jiang, Barb Jesse and Kathy Olson as new hires. He then talked about two open positions and the status of filling them. One open position is for a Geologist for which there is a possible candidate identified. The second position is for a Geophysicist for which a 'probable candidate has been identified. Morale was discussed and Glen outlined his perception of morale in the institute based on a qualitative survey of a limited selection of individuals. Morale is mixed and most negative morale is attributed to the change of guard at the director level. Certain individuals have not bought into the Director's approach; some have doubts that his approach is best for the institute. Commissioner Hinckley pressed for clarification. Dr. Murrell expanded by saying that it is not a 'black and white' issue but is composed of various facets related to the new direction e.g. Project Management approach, more industry focus, top-down management. Dr. Murrell stated that he needs more time to work on this. He also stated that Salary is a concern, not just the lack of cost of living adjustment but also certain perceived, and real, imbalances present amongst the group.

Dr. Murrell addressed Staff at Risk. He asked that the Commission first consider that most of the staff has 1 year contracts, many of them are young and mobile, many of them have options and many of them have spouses/children to consider. He then addressed each individual in the organization and their likelihood of leaving. In summary, he considered only Geoffrey Thyne and Brian Reyes to present any obvious risk of leaving in the near future. Discussion following Dr. Murrell's presentation centered around the importance of understanding and addressing morale issues (Bebout), the difficulty of doing anything regarding salary levels, the relative security and prosperity of state employees in Wyoming compared to other states (Bebout), and that dissatisfaction in the job is a valid justification for individuals to leave (Commissioner Hinckley, Fear).

Staff Retention

Several issues were discussed regarding EORI staff retention including: recent turnover, salary treatment, and staff morale. The following staff resigned since the first of the calendar year: Mark Tomasso (Senior Research Scientist), Lon Whitman (Outreach Manager), and Julie Hamilton (EORI Office Manager). EORI has hired Kathy Olson as the new EORI Office Manager, and is in the process of hiring a new Senior Research Scientist. The qualifications for a new Outreach Manager were discussed during the EORC meeting. The recruiting process for a new EORI Outreach Manager will occur as soon as it is practical.

Salary treatment was discussed with the EORC in light of the following:

1. Increased competition with industry in an environment of rising salaries for energy professionals, and
2. The second year of a salary freeze imposed by the state of Wyoming.

The EORC indicated that they expect EORI to comply with University of Wyoming salary policy. Raises can be requested from the university and approved by the university if a staff person is promoted. Several EORI staff was identified as possibly eligible for promotion. The university also allows for matching pay increases offered by outside entities if the subject staff person is strategically important to the continued success of affected university programs. EORC members indicated a willingness to accept some staff turnover related to the factors listed above.

VIII. Next Meeting

July 20, 2011

Commissioner Fear moved the Commission adjourn the meeting. Commissioner Williams seconded. Approved.

IX. Kathy Olson reviewed Action Items.

X. Adjournment