



**Plains CO₂ Reduction (PCOR) Partnership Monthly Update
February 1–29, 2012**

PHASE III ACTIVITIES

Task 1 – Regional Characterization (Wesley D. Peck)

Highlights

- Continued preparation of three posters highlighting the Rival Field activities for the upcoming American Association of Petroleum Geologists (AAPG) 2012 Annual Convention and Exhibition scheduled for April 22–25 in Long Beach, California.
- Continued preparation of Deliverable (D) 5, second target area completed, about the Rival Field.
- Planning is under way for an update to the oil and gas field storage values for the PCOR Partnership region.
- NATCARB (the National Carbon Sequestration Database and Geographic Information System) provided a geodatabase of the U.S. Environmental Protection Agency's (EPA's) CO₂ sources. A brief review of the data is under way to determine how the PCOR Partnership may integrate the data.
- Discussed in-house the Rival CO₂ Prophet Model history-matching results.

Task 2 – Public Outreach and Education (Daniel J. Daly)

Highlights

- Continued to review film footage from the Bell Creek 0506 OW monitoring well.
- Continued efforts to develop an outreach vision for the Bell Creek project, including discussions with Denbury Onshore, LLC (Denbury), during its visit to the Energy & Environmental Research Center (EERC) on February 2. Continued efforts to compile a “source book” for the Bell Creek region for local Bell Creek project outreach.
- Coordinated preparations for the Fort Nelson site visit with Prairie Public Broadcasting (PPB), which occurred the week of February 27.
- Continued efforts to update the Bell Creek Test Site PowerPoint presentation (D18) due March 31.
- Drafted and submitted abstracts to the International Conference on Greenhouse Gas Technologies (GHGT-11) on behalf of the Regional Carbon Sequestration Partnership (RCSP) Outreach Working Group and the PCOR Partnership Program.
- Continued to compile data on K–12 schools in the PCOR Partnership region.
- Finalized the Fort Nelson poster (D26).

- Continued efforts to update the public Web site (D13, due July 2012).
- Received an invitation to speak at the Lignite Energy Council teacher seminar in June 2012.
- Continued to develop outreach materials to address natural storage of CO₂, gas field chemical composition, unconventional oil and gas resources, and related topics.

Task 3 – Permitting and NEPA (National Environmental Policy Act) Compliance (Lisa S. Botnen)

Highlights

- Began a more thorough, in-depth analysis of the EPA’s Mandatory Greenhouse Gas Reporting Rule Subpart RR.
- Continued planning for the 4th Annual Regulatory Roundup meeting to be held this summer.
- Participated in Alberta’s Stakeholder Review of Draft Quantification Protocol for Fuel Switching in Mobile Equipment webinar.
- Reviewed information regarding the North American Climate Exchange, which is a Calgary-based offset exchange that will launch a new platform for trading carbon offset credits in mid-March.
- The Phase II Lignite site closure report is undergoing in-house review.

Task 4 – Site Characterization and Modeling (James A. Sorensen)

Highlights

- Fort Nelson test site activities included the following:
 - Held an in-house project update meeting on February 13.
 - Continued work on the geochemical report (D41/M32, due April 30, 2012).
 - Continued work on geomechanical modeling.
 - Held the monthly Fort Nelson conference call on February 23. Topics discussed included a brief modeling update; the upcoming (March) DOE meeting; potential dates for the quarterly project meeting in Grand Forks; and the trip to Fort Nelson for filming.
 - Continued development of the scopes of work for each of the key activities to be undertaken by the EERC through year end.
 - Continued work on the development of the latest updated version of the static geologic model.
 - Traveled with PPB to Fort Nelson, British Columbia, Canada, to visit the proposed demonstration site, the gas-processing plant, and the general area and to capture video footage for use in a future documentary.
- Bell Creek test site activities included the following:
 - Continued developing a plan for a full-field geologic model of the test site.
 - Initiated laboratory testing on sidewall cores from Monitoring Well 0506OW.
 - Continued work on the geomechanical modeling.
 - Staff traveled to Denver to view slabbed, full-diameter core and to finalize the test matrix.
 - Continued preparation of Milestone M10 entitled “Bell Creek Test Site Wellbore Leakage Data Collection” due March 31.

Task 5 – Well Drilling and Completion (John A. Hamling)

Highlights

- Continued planning for electrical installation of permanent downhole monitoring equipment on the monitoring well.
- Continued work on interpretation of soil gas and water samples from first round of monitoring, verification, and accounting (MVA) work.
- Continued preparations for the next round of soil gas and water baseline sampling at the Bell Creek Field.
- Held an in-house meeting February 1–2 with staff from Denbury to discuss the data collected from the monitoring well and to discuss upcoming characterization and monitoring plans.
- Communicated with partners (Denbury and Halliburton) on well log processing.
- Met with representatives from Pinnacle on February 21 to discuss the microdeformation monitoring potential for Bell Creek.
- Completed installation of surface building over monitor wellhead to house surface-monitoring equipment.

Task 6 – Infrastructure Development (Melanie D. Jensen)

Highlights

- Continued testing the interactive technology tree on the PCOR Partnership Decision Support System (DSS, © 2007–2012 EERC Foundation®).
- Continued work on an interactive compression technology tree for the DSS.
- Continued work on D84, a report entitled “A Phased Approach to Building a Pipeline Network for CO₂ Transport During Carbon Capture, Utilization, and Storage (CCUS).” Three analogs (the U.S. natural gas pipeline system, the electrical grid, and the U.S. Interstate Highway System) are being researched to identify methods that were used to develop those networks.
- Submitted an abstract on the phased pipeline network approach to GHGT-11.
- Responded to a partner’s questions about various capture technologies that made the news recently.
- Began working with a PCOR Partnership partner to address the partner’s needs for materials that can be distributed at public meetings during which CCUS will be discussed.

Task 7 – CO₂ Procurement (John A. Harju)

Highlights

- Participated in ongoing project discussions with Denbury.

Task 8 – Transportation and Injection Operations (Melanie D. Jensen)

Highlights

- Reviewed information about surface facilities and attended the surface facilities discussion with Denbury during its visit to the EERC.

Task 9 – Operational Monitoring and Modeling (Charles D. Gorecki)

Highlights

- Continued Bell Creek site activities, including the following:
 - Continued work on history matching.
 - Began work on obtaining waterflood history matching for the Bell Creek CO₂ Prophet model.
 - Submitted two abstracts on the Bell Creek project for GHGT-11 Conference in Kyoto, Japan, in November.
- Continued Fort Nelson site activities, including the following:
 - Continued working on the existing geomechanical data, constructing and correlating for the mechanical earth model (MEM) in Petrel.

Task 10 – Site Closure (to be announced [TBA])

- This task is anticipated to be initiated in Quarter 1 – Budget Period (BP) 5, Year 9 (October 2015).

Task 11 – Postinjection Monitoring and Modeling (TBA)

- This task is anticipated to be initiated in Quarter 1 – BP5, Year 9 (October 2015).

Task 12 – Project Assessment (Katherine K. Anagnost)

Highlights

- Submitted the draft project assessment report (D57) for the period October 1, 2010 – September 30, 2011, on December 29, 2011. The next assessment report is due by December 31, 2012.

Task 13 – Project Management (Charles D. Gorecki)

Highlights

- Hosted the inaugural PCOR Partnership Technical Advisory Board (TAB) meeting February 15 and 16, 2012, in San Diego, California.
- Continued exploring potential topics for a workshop to be held in conjunction with the annual meeting.
- Provided information upon request from DOE on CO₂ Reservoir Monitoring/Surveillance.
- Provided information upon request from DOE on the Phase II Zama project and the fact that CO₂ was stored in the oil fields.
- Held an in-house Bell Creek project update meeting on February 6.
- Presented at the Carbon Management Technologies Conference (CMTC) held February 7–9 in Orlando, Florida, including the following titles:
 - “A Risk-Based Monitoring Plan for the Fort Nelson Feasibility Project”
 - “Integrating CO₂ EOR and CO₂ Storage in the Bell Creek Oil Field”
 - “Addressing Carbon Capture, Utilization, and Storage Across the Central Interior of North America” (poster)

- Submitted 11 abstracts for GHGT-11 (Kyoto).
- Abstracts for CCUS-11 (Pittsburgh) were accepted and included the following titles:
 - “Overview of the Bell Creek Combined CO₂ Storage and CO₂ EOR Project” (for poster)
 - “CO₂ Storage Resource Potential of the Cambro-Ordovician Saline System in the Western Interior of North America” (oral presentation)
 - “Overview, Status, and Future of the Fort Nelson CCS Project” (oral presentation)
- Submitted three abstracts to the 34th International Geological Congress scheduled for August 5–10 in Brisbane, Australia.
- Participated in a conference call with DOE and Spectra Energy on February 23 to discuss the upcoming meeting scheduled for March 20 in Pittsburgh.
- Deliverables and milestones completed in February:
 - January monthly update
 - Task 16: D91 – Report – Geological Characterization of the Basal Cambrian System in the Williston Basin
 - Task 14: M23 – Monthly WWG Conference Call Held

Task 14 – RCSP Water Working Group (WWG) Coordination (Ryan J. Klapperich)

Highlights

- Held the monthly conference call on February 28.
- Continued revisions to the WWG Interest Inventory.
- Distributed the January WWG conference call minutes on February 6.
- Began planning for the March WWG conference call.

Task 15 – Further Characterization of the Zama Acid Gas Enhanced Oil Recovery (EOR), CO₂ Storage, and Monitoring Project (James A. Sorensen)

Highlights

- Submitted an abstract on dynamic modeling to GHGT-11 on February 8.
- Continued discussing plans for the regional technology implementation plan due April 2012.
- Worked on the conditional static geological model construction.
- Imported the newly conditioned static geological model to GEM and worked on the construction of dynamic model.
- Completed work on the Zama dynamic model for prediction runs.
- Continued working on the simulations to determine more accurate original oil in place and acid gas storage capacity estimates for the F-pool.
- Provided follow-up information (from the January 19 meeting in Calgary) to Apache Canada.

Task 16 – Characterization of the Basal Cambrian System (Wesley D. Peck)

Highlights

- Submitted D91 report entitled “Geological Characterization of the Basal Cambrian System in the Williston Basin” on February 29.
- Scheduled a joint project meeting in Regina for April 18.
- Continued work on the 3-D model with plans to be completed by early May.

- Review of nearly 300 North Dakota well files is under way with respect to harvesting data for the well integrity aspect of the Basal Cambrian study.

Travel/Meetings

- January 28 – February 4, 2012: presented at EUEC (Energy, Utility, & Environment Conference) in Phoenix, Arizona.
- January 30 – February 2, 2012: participated in NACAP (North American Carbon Atlas Partnership)-6 meeting in Riviera Maya, Mexico.
- February 5–11, 2012: viewed core samples at the Core Research Center and Core Labs in Denver, Colorado.
- February 6–12, 2012: presented at CMTC in Orlando, Florida.
- February 14–17, 2012: hosted the inaugural TAB meeting in San Diego, California.
- February 19–24, 2012: attended a Schlumberger Information Solutions training course entitled “Techlog Formation Evaluation” in Houston, Texas.
- February 28 – March 5, 2012: continued to view core samples at the Core Research Center and Core Labs in Denver, Colorado.

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