



Plains CO₂ Reduction (PCOR) Partnership Monthly Update January 1–31, 2012

PHASE III ACTIVITIES

Task 1 – Regional Characterization (Wesley D. Peck)

Highlights

- Submitted Deliverable (D) 81, PCOR Partnership Atlas, 4th edition, on January 31, 2012.
- Gave a tour of the EERC to Schlumberger visitors who were in Grand Forks to visit the core library.
- The task leader was named the point of contact for the upcoming U.S. Department of Energy's (DOE's) fourth atlas.
- Participated in a WebEx on January 24 regarding the North American atlas.
- Gave a presentation on the PCOR Partnership Program during the carbon capture and storage (CCS) Technologies II Track at the Energy, Utility & Environment Conference (EUEC) EUEC 2012 on January 31, 2012, in Phoenix, Arizona.
- Continued preparation of three posters 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 D5, second target area completed, for the Rival Field.

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

Highlights

- Wrapped up filming at the Bell Creek site.
- On January 8, permission was granted to Swedish Television for the use of PCOR Partnership documentary footage in a television short regarding Biorecro.
- Tentatively committed to present before 50 educators at the North Dakota Geographic Alliance meeting in June 2012.
- Accepted an invitation to participate in the Petroleum Technology Research Centre's (PTRC's) Aquistore advisory group.
- On January 23, participated in PTRC's Aquistore advisory group conference call. Topics discussed included an open house during the week of March 5 and the Canadian government funding announcement that is anticipated during the week of February 20.

- Began compiling a “source book” for the Bell Creek region and developing a draft vision statement for local Bell Creek project outreach.
- Continued to review footage from the Bell Creek 0506 OW monitoring well. Continued efforts to develop an outreach vision for the Bell Creek project.
- Continued efforts to finalize the Fort Nelson poster (D26).
- Continued efforts to update the public Web site (D13, due July 2012).
- Continued efforts to implement use of the outreach tracking database.
- 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 review of materials in preparation for a call with North Dakota’s CO₂ Storage Workgroup meeting/conference call.
- Participated in a conference call with Spectra Energy staff to discuss and provide comment on the Canadian Standards Association (CSA) standard for geologic storage.
- Participated in a meeting of the North Dakota CO₂ Storage Workgroup to review and provide comment on North Dakota’s new draft rules for CO₂ storage. North Dakota is rewriting its rules in an effort to obtain primacy from the U.S. Environmental Protection Agency (EPA) for Class VI wells.
- Provided input and comments to the North Dakota Industrial Commission (NDIC) Oil and Gas Division on its draft Class VI rules.
- Attended the Groundwater Protection Council 2012 UIC Conference held January 23–25, 2012, in Houston, Texas (www.gwpc.org/meetings/uic/uic.htm). Had discussions regarding North Dakota’s attempt to obtain primacy for Class VI well and various other CCS-related issues with underground injection control (UIC) regulators from the PCOR Partnership region and beyond.

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

Highlights

- Continued preparation of a technology assessment on the geomechanical modeling options available.
- Fort Nelson test site activities included the following:
 - Continued the multimineral analysis of the Fort Nelson wells using Techlog, the results of which will be used toward development of the latest version of the static geologic model of the Fort Nelson area.
 - Continued correlating geomechanical data with reservoir properties to construct the geomechanical static model with Petrel.
 - Continued work on the geochemical report (D41/M32, due April 30, 2012).
 - Submitted the site characterization report (D65/M29) on January 31, 2012.
 - Continued development of the scopes of work for each of the key activities to be undertaken by the EERC over the next 12 months.

- Continued work on the development of the latest updated version of the static geologic model using data generated in 2011.
- Bell Creek test site activities included the following:
 - Began developing a plan for a full-field geologic model of the test site
 - Prepared for an in-house meeting February 1–2 with staff from Denbury Onshore, LLC (Denbury) to discuss the data collected from the monitoring well and to discuss this year’s characterization and monitoring plans.

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

Highlights

- Completed drilling, coring, logging, and permanent downhole monitoring (PDM) equipment installation at the Bell Creek observation well, 0506 OW, on January 10, 2012.
- Performed an operational check of PDM systems after installation.
- Completed cementing operations.
- Initiated wellhead assembly and cased-hole cement-bond logging operations.
- Completed analysis of all soil gas and water samples from the first-round of baseline monitoring, verification, and accounting (MVA) work.
- Scheduled a monitoring well update meeting with Denbury in Grand Forks on February 1 and 2, 2012.
- Continued work on interpretation of soil gas and water samples from first round of MVA work.
- Completed compilation of an archive of data and samples obtained from the monitoring well.

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.
- Work began on D84, a report entitled “A Phased Approach to Building a Pipeline Network for CO₂ Transport During 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.
- Prepared an abstract on the phased pipeline network approach for submittal to the 11th Greenhouse Gas Technologies Conference (GHGT-11) in Japan in November 2012.

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

- Nothing to note at this time.

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

Highlights

- Modeling staff participated on January 24–25 in an abstract review meeting for the 11th Annual Carbon Capture, Utilization, and Sequestration Conference (CCUS-11) scheduled for May 2012 in Pittsburgh.
- Continued Bell Creek site activities, including the following:
 - Continued work on history matching.
 - Drafted two abstracts on the Bell Creek project for GHGT-11 the CCUS Conference in Pittsburgh.
- Continued Fort Nelson site activities, including the following:
 - Held a conference call with Nakles Consulting to discuss the development of the site MVA plan.
 - Continued working on the existing geomechanical data; construct and correlate 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)

- Submitted the draft project assessment report (D57) for the period October 1, 2010 – September 30, 2011, on December 29, 2011.

Task 13 – Project Management (Charles D. Gorecki)

Highlights

- Continued preparations for the inaugural PCOR Partnership Technical Advisory Board (TAB) meeting tentatively scheduled for February 15 and 16, 2012, in San Diego, California.
- A new milestone (M36 – Annual Advisory Board Meeting Scheduled) has been added to the Gantt chart at Task 13 and is due by March 31 each year, beginning with 2012.
- Continued preparations for the 2012 annual meeting. The place is Milwaukee; the dates are September 11–13; the venue is the InterContinental Hotel (www.intercontinentalmilwaukee.com/); the evening event is planned for the Harley

Museum (www.harley-davidson.com/wcm/Content/Pages/HD_Museum/Museum.jsp). The workshop topic has not yet been determined.

- Abstracts for GHGT-11 (Kyoto) are under preparation.
- Abstracts for CCUS-11 (Pittsburgh) were submitted by January 20 and included the following titles:
 - “Overview of the Bell Creek Combined CO₂ Storage and CO₂ EOR Project”
 - “CO₂ Storage Resource Potential of the Cambro-Ordovician Saline System in the Western Interior of North America”
 - “Overview, Status, and Future of the Fort Nelson CCS Project”
- Participated in a Web Ex on January 17 regarding the North American Carbon Atlas Partnership (NACAP)-6 meeting.
- Welcomed Neeraj Gupta, along with other representatives from the Midwest Regional Carbon Sequestration Partnership (MRCSP), Battelle, and Core Energy, to the EERC on January 25. Topics discussed included program overviews for the PCOR Partnership and MRCSP; an overview of the MRCSP Phase III project in Michigan; and detailed topical discussions on the Zama Field and other carbonate rock injection projects.
- Held an in-house group update meeting on January 26.
- Participated in the DOE NACAP-6 meeting in Mexico. Other U.S. attendees included Bob Wright, Daniel Soeder, and Tim Carr.
- Deliverables and milestones completed in January:
 - December monthly update
 - Task 1: D81 – Regional Carbon Sequestration Atlas (Update)
 - Task 4: D65/M29 – Fort Nelson Test Site – Site Characterization Report
 - Task 13: D58/D59 – Quarterly Progress Report/Milestone Quarterly Report
 - Task 14: M23 – Monthly WWG Conference Call Held

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

Highlights

- Continued synthesizing comments on the NATCARB Brine Viewer.
- Held the monthly conference call on January 19.
- Continued revisions to the WWG Interest Inventory.
- Drafted an e-mail to check with WWG members as to whom the interest survey should be sent.

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

Highlights

- Presented on the Zama Project to the MRCSP members meeting at the EERC on January 25.
- Participated in a project discussion on January 19 with Apache Canada at its offices in Calgary.
- Drafted an abstract on dynamic modeling for GHGT-11.
- In-house discussions are under way regarding the updated regional technology implementation plan due April 2012.

- Started work on the Zama dynamic model for prediction runs.

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

Highlights

- Worked on Basal Cambrian calculations, graphics, and information for the report entitled “Geological Characterization of the Basal Cambrian System in the Williston Basin” (D91) due February 29.

Travel/Meetings

- December 11, 2011, to January 10, 2012: traveled to oversee drilling efforts at the Bell Creek oil field located in southeastern Montana.
- January 18–20, 2012: attended meetings with Apache Canada Ltd and Husky Energy in Calgary, Alberta, Canada.
- January 23–25, 2012: attended the Groundwater Protection Council 2012 UIC Conference held in Houston, Texas.
- January 23–25, 2012: participated in an abstract review meeting for the Carbon Capture, Utilization, and Sequestration Conference in Arlington, Virginia.
- January 28 – February 4, 2012: presented at EUEC in Phoenix, Arizona.
- January 30 – February 2, 2012: participated in NACAP-6 meeting in Riviera Maya, Mexico.

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