



REGISTER NOW

April 4-5, 2012 in Golden, Colorado

PUTTING THE BUSINESS ELEMENTS TOGETHER FOR CO₂ EOR USING CAPTURED CARBON

CCUS (Carbon Capture, Utilization & Storage)—Technical Staff, for today and tomorrow, is a critical need

A Two-day Interactive Forum by the Permian Basin CCUS Center

The Emergent Business of Carbon Capture, Utilization and Storage. The Permian Basin leads the world in broad-scale, economically attractive CO₂ Enhanced Oil Recovery (EOR). Enterprising oil producers in the Permian Basin have, from day one, continued to advance technologies, both from a reservoir and operations standpoint. The end result – there are now more opportunities for CO₂ EOR in conventional “main pay” zone floods than there is supply. Furthermore and moving a step beyond that, field tests have now proven that producing oil in the often massively thick targets beneath the oil-water contacts in a reservoir can be economically attractive. Considering expanding “main pay” zone and Residual Oil Zone (ROZ) applications, the future volume of CO₂ needed in the Permian Basin is huge. Even if the supply from natural sources expanded, and that’s not a given, there is still a supply gap for captured anthropogenic CO₂ to fill. Then there are the other basins across the U.S. where there are firm indications of large ROZ potential.

But it’s no easy trick to put all the business elements (carbon capture, purification, compression, transportation, the injection and oil production) together in a deal that works economically for all. This forum features speakers from companies on the leading edge of CO₂ EOR, companies working toward making energy at home and CCUS part of the equation. Attend and learn insights firsthand from several sectors – O&G producers, the service industry, the power sector and the capture industry. Learn the role that government could fill. Learn how a national EOR initiative is advancing thinking.

Featured speakers from

- Texas Clean Energy Project, Eric Redman, President, Summit Power Group LLC – a West Texas IGCC plant is being built by Summit – learn what pieces had to come together for this project to happen.
- The Federal government, U.S. Department of Energy – CO₂ EOR as the U in CCUS
- A National EOR Initiative, Judi Greenwald, VP, Technology and Innovation, Center for Climate and Energy Solutions – further putting the pieces in place for expanded CO₂ Capture and EOR.
- Producers – those who have the EOR experience and are putting CO₂ EOR projects together today.

Topical sessions (each w three primarily industry speakers) covering

- CO₂ Sources
- Processing/Compression/Transportation
- Geology and Reservoir Characterization
- Downhole Operations/Safety
- Surface Operations/Safety
- Key Obstacles to Business Success

Promising students,
tomorrow’s leadership,
are also being invited

Apply what you learn – at the beginning of the forum, tackle a “business elements” problem as part of a small group. At the end of the forum – revisit the problem, measure how your potential solutions have improved.

Permian Basin CCUS Center — applying world class training in carbon capture, utilization and storage — experienced individuals familiar with operations, transportation, legal and regulatory, and separation putting the pieces together. The Center is a partnership of three strong organizations, combined, they bring formidable industry knowledge and insight to achieve project goals.



Applied Petroleum Technology Academy

The convening organization for Annual CO₂ Conference, founded in the Permian Basin, which produces 70% of world’s CO₂ EOR production

WWW.APTAPB.ORG



Petroleum Technology Transfer Council

Delivering insights about “applied, practical” technologies to an extensive network of independents

WWW.PTTC.ORG



American Association of Petroleum Geologists

World’s largest geoscience organization with strong interest in the science of CCUS

WWW.AAPG.ORG

S P O N S O R L O G O S

Forum Agenda

Listing of involved companies/organizations (subject to change)

- *From Industry:* Air Products, Baker Hughes, Blue Source, Clean Energy Systems, Denbury Resources, Kinder Morgan, Legado Resources, Paxton, Praxair, Summit Power Group, Tenaska, Whiting Petroleum
- *From Government/Other:* Center for Climate and Energy Solutions, DOE Office of Fossil Energy, DOE's National Energy Technology Laboratory, Energy & Environmental Research Center @ University of North Dakota, Natural Resources Defense Council, TX Bureau of Economic Geology

DAY ONE - APRIL 4, 2012

8:00 am	Check-in, Continental Breakfast
8:30 am	Welcome & Forum Overview E. Lance Cole, Petroleum Technology Transfer Council (PTTC)
8:35 am	Morning Keynote Speaker Texas Clean Energy Project, & Other Summit Initiatives Eric Redman, President, Summit Power Group LLC
9:15 am	Introduction of Hands-on CCUS Exercise Steve Melzer, Melzer Consulting and E. Lance Cole, PTTC
9:35 am	Mini-Break
9:45 am	Hands-on CCUS Exercise Forum participants, by small group
10:30 am	CCUS Project Screening & Economics John Steelman, Natural Resources Defense Council
11:00 am	Session One: Anthropogenic CO₂ Sources <i>Session Co-Chairs: Steve Melzer, Melzer Consulting and Dwight Rychel, PTTC</i> <ul style="list-style-type: none"> • Trailblazer & Other Tenaska CCUS Projects, Greg Kunkel, VP Environmental Affairs, Tenaska, Inc. • Follow the CO₂ – How Sources of CO₂ Define Deployment Scenarios for Enhanced Oil Recovery, Joseph "Phil" DiPietro, Analyst, U.S. DOE's National Energy Technology Laboratory • Chris Peters, Clean Energy Systems
12:30 pm	Luncheon Keynote Speaker "CO ₂ EOR as the U in CCUS", The Federal Government, U.S. Department of Energy
2:00 pm	Session Two: Clean-up, Compression & Transportation – Getting CO₂ to the Oilfield <i>Session Co-Chairs: Robert D. "Bob" Kiker, Applied Petroleum Technology Academy and E. Lance Cole, PTTC</i> <ul style="list-style-type: none"> • Mike Blineow, Director Anthropogenic CO₂ Supply, Denbury Resources, Inc. • Steve Morrison, Air Products • (TBD)
3:30 pm	Mini-Break
3:40 pm	Session Three: Geology & Reservoir Characterization <i>Session Co-Chairs: Robert Trentham, Director, Center for Energy and Economic Diversification, University of Texas Permian Basin and Viola Rawn-Schatzinger, Operations Manager, PTTC</i> <ul style="list-style-type: none"> • Near Surface CO₂ Project @ SACROC, Rebecca Smyth, Project Manager, Bureau of Economic Geology, The University of Texas at Austin • Legado Resources (invited) • CO₂ EOR Project Reserves/Appraisal, Kerry Sandhu, Baker Hughes
6 - 7:30 pm	Reception @ Table Mountain Inn 1310 Washington Ave, Golden, CO. Ph 303-277-9898

DAY TWO - APRIL 5, 2012

8:30 am	<p>Session Four: CO₂ EOR – Downhole Operations & Safety <i>Session Co-Chairs: Robert D. “Bob” Kiker, Applied Petroleum Technology Academy and Dwight Rychel, Engineering Consultant, PTTC</i></p> <ul style="list-style-type: none"> • Using CO₂ for Artificial Lift, Ed Payne, Production Manager, Whiting Petroleum • Darrell Ricketson, Kinder Morgan • MVA, Kerry Sandhu, Baker Hughes
10:00 am	<p>Mini-Break</p>
10:10 am	<p>Session Five: CO₂ EOR – Surface Operations & Safety <i>Session Co-Chairs: Robert D. “Bob” Kiker, Applied Petroleum Technology Academy and E. Lance Cole, PTTC</i></p> <ul style="list-style-type: none"> • A Field Tour of North Ward Estes Operations by Process Flow, Ed Payne, Production Manager, Whiting Petroleum • Lonnie Ashley, Legado Resources, LLC • Plant Operations, Robert D. “Bob” Kiker, R.D. Kiker Inc.
11:40 am	<p>Luncheon Keynote Speaker “A National EOR Initiative”, Judi Greenwald, VP, Technology and Innovation, Center for Climate and Energy Solutions</p>
1:10 pm	<p>Business Implications of A Class VI Permit – The Long View? A Kansas Perspective Lynn Watney, Senior Scientific Fellow, Petroleum Geology, Kansas Geological Survey</p>
1:40 pm	<p>Barriers to Business Success <i>Session Co-Chairs: Steve Melzer, Melzer Consulting and Dwight Rychel, PTTC</i></p> <ul style="list-style-type: none"> • John Dobitz, President, Paxton U.S. Inc. • Ray Hattenbach, Blue Source • John Harju, Associate Director for Research, Energy & Environmental Research Center, University of North Dakota
2:40 pm	<p>Revisiting the CCUS “Hands-on Exercise” Steve Melzer, Melzer Consulting</p>
3:00 pm	<p>Conference Wrap-up & Your Feedback on the Forum E. Lance Cole, PTTC</p>
3:10 pm	<p>Conference Adjourns</p>

Consider combining business and pleasure with Late Spring Skiing in the Rockies

Posted Schedules Show Some Ski Resorts will still be open (www.accuweather.com/en/us/rocky-mountain-ok/74931/ski-weather/2163283)