



Advanced Resources  
International, Inc.

December 2009

# Advanced Resources International QUARTERLY UPDATE

Unconventional Resources • Enhanced Recovery • Carbon Sequestration

Advanced Resources International (ARI) is a professional services firm that provides geological, reservoir engineering, business and policy analysis and advice on a global basis related to unconventional gas resources, enhanced oil recovery and geologic carbon sequestration. Our quarterly update highlights current industry trends, ongoing and completed projects, recent publications, upcoming workshops and events, and company news. We encourage you to visit our website at [www.Adv-Res.com](http://www.Adv-Res.com) to learn more about our company history, research and technology activities, industry news and much more. You may also contact our offices listed at the bottom of this page for additional information.

## Advanced Resources' Senior Staff:

[Stephen Bumgardner](#)

[James Caballero](#)

[Michael Godec](#)

[Jason Hummel](#)

[Jonathan Kelafant](#)

[George Koperna](#)

[Vello Kuuskraa](#)

[Robin Petrusak](#)

[Scott Stevens](#)



### 7th Annual EOR Carbon Management Workshop in Houston, Texas

On December 7, 2009, Michael Godec, Vice President of Advanced Resources, delivered a presentation at the 7th Annual EOR Carbon Management Workshop in Houston, Texas entitled, "The Size of the (CO<sub>2</sub>-EOR) "Prize" Keeps Getting Larger." In this presentation, Mr. Godec characterized the status and outlook for CO<sub>2</sub>-EOR in the United States, presented the results of a recent study by Advanced Resources for the International Energy Agency Greenhouse Gas Programme on worldwide CO<sub>2</sub>-EOR potential, summarized recent work by Advanced Resources on the potential of "next generation" CO<sub>2</sub>-EOR technology and oil and gas potential in "deep saline formations with residual oil," often referred to as the residual oil zone or ROZ, and described strategies for expanding CO<sub>2</sub> storage with CO<sub>2</sub>-EOR.

### World Class CO<sub>2</sub> Sequestration Potential in Saline Formations, Oil and Gas Fields, Coal and Shale:

#### The U.S. Southeast Regional Sequestration Partnership has it All!

Robin Petrusak, ARI Project Manager, presented an e-poster at the 2009 SPE International Conference on CO<sub>2</sub> Capture, Storage, and Utilization held in San Diego, CA during November 2 - 4, 2009. The presentation and accompanying paper are titled [World Class CO<sub>2</sub> Sequestration Potential in Saline Formations, Oil and Gas Fields, Coal and Shale: The U.S. Southeast Regional Carbon Sequestration Partnership \(SECARB\) has it All! \(SPE 126619\)](#). The presentation provided an overview and update of potential CO<sub>2</sub> storage capacity for the SECARB region offered by various geologic options including conventional CO<sub>2</sub> storage in depleted oil and gas fields; CO<sub>2</sub> enhanced oil recovery (EOR); saline formations; unmineable coal seams; and organic shale formations ('gas shale'). The full range of CO<sub>2</sub> geologic storage options, plus extraordinary potential storage capacity in multiple, thick, porous and permeable Gulf Coast sandstones, contribute to the SECARB Region's 'world class' CO<sub>2</sub> storage potential. The presentation also featured ARI's recent regional assessments of CO<sub>2</sub> storage capacity for the Lower Tuscaloosa saline formation in the northern Gulf of Mexico Basin; for Lower Wilcox coal seams in the Gulf Coast Tertiary Coal Belt; and for the Barnett Shale in the Ft. Worth Basin, TX. Additional contributions to the CO<sub>2</sub> Capture, Storage and Utilization Conference were provided by Advanced Resources with presentations from [Vello A. Kuuskraa, ARI President "Cost-Effective Remediation Strategies for Storing CO<sub>2</sub> in Geologic Formations" \(SPE 126618\)](#), and [George J. Koperna, Jr., ARI Vice President, "Carbon Dioxide Enhanced Coalbed Methane and Storage: Is there Promise?" \(SPE 126627-PP\)](#), and from [Anne Y. Oudinot, ARI Senior Reservoir Engineer, "CO<sub>2</sub> Injection Performance in the Fruitland Coal Fairway, San Juan Basin: Results of a Field Pilot" \(SPE 127073\)](#), and [Karine Schepers, ARI Senior Reservoir Engineer, "Reservoir Modeling and Simulation of the Devonian Gas Shale of Eastern Kentucky for Enhanced Gas Recovery and CO<sub>2</sub> Storage" \(SPE 126620-PP\)](#).



### Advanced Resources International, asked to participate in United Nations Climate Change Conference

Mr. Vello A. Kuuskraa, president of Advanced Resources International, was asked to participate in the recent United Nations Climate Change Conference, COP15, "Natural Gas, Renewables and Efficiency: Pathways to a Low-Carbon Economy" sponsored by the American Clean Skies Foundation (ACSF), the UN Foundation (UNF) and the Worldwatch Institute, Copenhagen, December 7 - 18, 2009.

Mr. Kuuskraa's talk entitled "Worldwide Gas Shales and Unconventional Gas: A Status Report",



discussed how the discovery and development of gas shales and other unconventional gas resources in North America have led to a "paradigm shift" in the outlook for natural gas and the much larger role it could play in reducing emissions of CO<sub>2</sub>. Using the North American experience as the example, he discussed how the development of gas shales and unconventional gas could provide similar impacts on energy security and CO<sub>2</sub> emission reductions in Europe, China and other areas with large, prospective gas shale basins. Other presenters include Christopher Flavin, president of the Worldwatch Institute, Aubrey McClendon, CEO of Chesapeake Energy, and Senator Timothy E. Wirth, president of the United Nations Foundation.

#### PRESENTATION

#### POSITIONS AVAILABLE



Advanced Resources is always seeking experienced, talented and energetic individuals to join our team in both our Washington (DC) and Houston (TX) offices. If you are a geoscientist, engineer, business or policy analyst, with knowledge in the areas of [unconventional gas \(coalbed methane - CBM, gas shales, tight sands\)](#), [enhanced oil recovery \(EOR\)](#), or [carbon sequestration \(CO<sub>2</sub> sequestration\)](#), we would like to hear from you.

For more information please see our website for jobs available at [www.adv-res.com](http://www.adv-res.com) or submit your resume to Teresa Rhone at [trhone@adv-res.com](mailto:trhone@adv-res.com).



#### UPCOMING EVENTS:

##### **SPE Unconventional Gas Conference**

February 23 - 25, 2010

Hilton Hotel Pittsburgh

Pittsburgh, Pennsylvania

<http://www.spe.org/events/ugc/>

##### **SSEB's Associate Members Meeting & Luncheon**

February 22, 2010

Marriott Metro Center

Washington, DC

<https://s07.123signup.com/servlet/SignUp?PG=1531834182300&P=153183400>

##### **Southeast Regional Carbon Sequestration Partnership (SECARB)**

##### **5th Annual Stakeholders' Briefing**

March 9-10, 2010

Hilton Atlanta Airport

Atlanta, GA

<https://s07.123signup.com/servlet/SignUp?PG=1531834182300&P=153183400>

##### **AAPG 2010 Annual Convention & Exhibition**

April 11 - 14, 2010

New Orleans, Louisiana

<http://www.aapg.org/NewOrleans/>

For a complete list of industry news, recent white papers and case studies please visit our website [www.Adv-Res.com](http://www.Adv-Res.com) or contact one of our offices:

#### **Washington, DC**

4501 Fairfax Drive, Suite 910

Arlington, VA 22203

Phone: 703.528.8420

Fax: 703.528.0439

#### **Houston, TX**

11490 Westheimer Road, Suite 520

Houston, TX 77077-6841

Phone: 281.558.9200

Fax: 281.558.9202

#### **Knoxville, TN**

603 W. Main Street, Suite 906

Knoxville, TN 37902

Phone: 865.541.4690

Fax: 865.541.4688