



## **Oil and Gas Program Overview**

---

Roy Long, Technology Manager, NETL  
UDAC Meeting, February 23, 2011, Washington, D.C.

# Outline

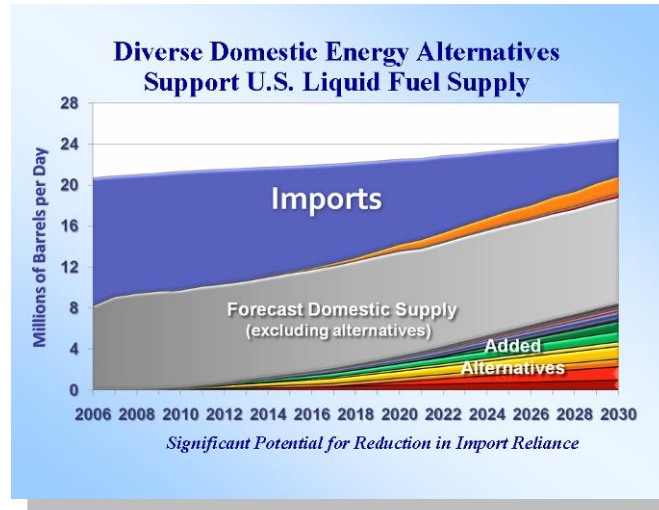
- **Introduction**
- **Traditional O&G Program Overview**
  - O&G Projects Summary
  - Stripper Well Consortium Highlight
- **Integrated Technology Transfer Program**
  - Structure
  - Publications
  - Knowledge Management Database (KMD)

# NETL Applies Basic Science to Technology Development, Demonstration, & Deployment

## *Onsite Research & Development*



## *Systems, Analyses, & Planning*



## *Extramural Research & Collaboration*



*Developing the critical science and technology to discover and Commercialize advanced energy systems that efficiently utilize domestic Resources in an environmentally sustainable manner*

# NETL Natural Gas & Oil R&D Program

## *Comprehensive R&D Portfolio*

*Advancing Technologies Supporting Development of Domestic Unconventional Resources*



**Unconventional  
FE Technologies**



**Methane  
Hydrates**



**Environmental  
Solutions**

**Ultra-Deepwater & Unconventional  
Resources Program**



**EPAct 2005  
Title IX, Subtitle J**

# Outline

- Introduction
- **Traditional O&G Program Overview**
  - O&G Projects Summary
  - Stripper Well Consortium Highlight
- Integrated Technology Transfer Program
  - Structure
  - Publications
  - Knowledge Management Database (KMD)

# Traditional Program Overview

- 67 Projects (excludes Hydrates and Section 999 projects)
- \$121 MM Total Value (\$85 MM Gov't. Share, \$36 MM Cost-Share)
- Current projects from prior year funding:
  - Fracture Flowback & Produced Water Treatment and Mgmt.
  - Environmental Impact Mitigation
  - Water Resources Management
  - Enhanced Oil Recovery
  - Unconventional Oil Production
  - Increasing Domestic Oil and Gas Production
  - Reservoir Characterization
  - Drilling/Completion/HPHT Downhole Tools
  - Seismic Technology
  - Oil and Gas Infrastructure-Related
  - Technology Transfer

# Stripper Well Consortium



- Industry-driven consortium est. Oct 2000
- Funded by NETL, NYSERDA, members (75)
- ~100 projects funded
- SWC - \$9.6 million Cost Share - \$7.6 million
- Target: small independents
- Excellent Cooperation amongst members
- Projects: 1 year duration
- Process very Operator friendly

- **Low-cost innovative technology to:**

- Increase production
- Reduce operating costs
- Reduce environmental footprint

*[www.energy.psu.edu/swc](http://www.energy.psu.edu/swc)*



# Outline

- Introduction
- Traditional O&G Program Overview
  - O&G Projects Summary
  - Stripper Well Consortium Highlight
- **Integrated Technology Transfer Program**
  - Structure
  - Publications
  - Knowledge Management Database (KMD)



# NETL Integrated Technology Transfer Program Structure

Information to be Delivered

	Program Consortium	NETL	Contractors	DOE-HQ
Project Reports		Complementary program	Interim and final reports	
Project Data Sets		Complementary program	Spreadsheets, GIS, other	
Project Software			Models and online tools	
Presentations/papers	Program and project level	Program and project level	Project level	High Level Program
Program Information	RFPs, deliverables, metrics, feedback	Program updates, benefit assessments		Program activity, FAC reports, mandated info.

Delivery Vehicle

Project websites			Selected projects have websites	
Program websites	RPSEA site with links	<b>KMD Portal</b> on NETL site with links		Pages on DOE site
Publications	Newsletter, articles in trade press	Newsletter, Techlines, articles in trade press	Technical papers, articles	Press releases, Techlines
Forums/Workshops	Forums/Workshops	<b>PTTC Workshops</b>		
Public meetings	SPE papers, other technical meetings	SPE papers, other technical meetings	SPE papers, other technical meetings	

# Technology Transfer Program Publications Currently Available

**E&P Focus**

Dear E&P Focus Readers:

I would like to welcome our past and new readers to the Spring 2009 issue of E&P Focus, one of a number of technology publications that the Department of Energy's (DOE) National Energy Technology Laboratory (NETL) produces for many of our national energy industry stakeholders informed about the research under way at the Department. A lot has happened since we last issued E&P Focus in our previous program in 2008. We have made significant progress in three main areas under the "oil and natural gas exploration and production" banner. The main focus is on the quarterly newsletter available on the NETL Web site at <http://www.netl.doe.gov/technology-transfer>.

First of all, the appropriated funds program of environmental and natural gas research continues to advance. A very successful solicitation was carried out in 2008 with 18 awards being made for research projects targeting recovery of oil in ultra-conventional reservoirs (e.g., the Bakken shale, enhanced oil recovery), and methane hydrate (large basins of resources and addressing environmental issues related to oil and natural gas production). The total value for all of the selected projects represents more than \$24 million over 10 to 15 months for drilling and 17 months cost share from research partners.

NETL, National Energy Technology Laboratory, 9730 Pennsylvania Avenue, Pittsburgh, PA 15236-1509. For more information, visit [www.netl.doe.gov](http://www.netl.doe.gov).

**the ENERGY lab**  
Where energy challenges converge and energy solutions emerge

Site Map GO

Home > Technologies > Oil and Natural Gas Supply

**Technologies**  
Oil and Natural Gas Supply

Oil and natural gas are the lifeblood of our economy, accounting for more than 80 percent of the energy consumed in the United States. To meet projected demand, our Nation has a vital interest in ensuring that competitively-priced domestic natural gas and oil remain part of the U.S. energy portfolio for decades to come. [Read More](#)

**Announcements**  
New Online Database of Oil and Natural Gas Research Results Now Available  
The U.S. Department of Energy plans to introduce a new, user-friendly online repository of oil and natural gas research results at the Society of Petroleum Engineers' Annual Technical Conference and Exhibition, to be held in New Orleans, La., October 4-7, 2009. By providing easy access to the results of nearly four decades of research supported by the Office of Fossil Energy's Oil and Natural Gas Program, the knowledge management database could ultimately help boost recovery of the nation's oil and gas resources. [Access the KMR](#)

**Knowledge Management Database**



**RPSEA Resource**  
March/April 2009 Volume 3, Number 5  
Online Bimonthly RPSEA Member Newsletter

**Table of Contents**

**President's Perspective**  
President's Perspective  
RPSEA Involvement in the United Organization at OTC-09  
Join RPSEA at the Clean Technology Conference & Expo 2009  
RPSEA Sponsors Energy Award at the 2009 Texas Business Plan Competition  
Welcome Our Donors  
Knowledge/Scholarship Program Recipient Spotlight  
E&P Environmental Research and Small Producer Project Selections Announced  
Small Producer Project Highlight  
Environmental Research Project Spotlight  
Ultra-Deepwater Project Highlight  
Calendar of Events

**President's Perspective**  
While we have been going on at RPSEA, I'd like to highlight just a few events. First is the selection of our 2008 Environmental Research and Small Producer projects. The quantity and quality of the proposals made for a grant challenge for our Program Advisory Committee (PAC) and Research Advisory Group (RAG) selection committees. These 13 highly innovative projects, chosen from a total of 92 proposals, represent the collective effort of members in this innovative public/private partnership. And, with both results of our 2008 ultra-deepwater projects now complete and that selection process well underway, we'll have more selections to announce soon.

Second in the slate of activities we have coming up including OTC 2009 and Clean Tech 2009. Our "United Organization" status at OTC on May 6 is something we're especially proud of. And, our three exciting panels at Clean Tech 2009 on May 6 will provide RPSEA and member organizations the opportunity to have a frank discussion on the important role of natural gas in our nation's energy portfolio. On the subject, one of the opportunities I've been able to participate in as an advisory board member is a comprehensive policy study on natural gas at Massachusetts Institute of Technology (MIT). This two-year, multi-system study which started in the fall of 2008, will provide federal policymakers with information on natural gas similar to the previous widely acclaimed MIT studies on nuclear power and coal.

One of the enlightening events I've attended recently was Hart's Developing International Gas (DIGG) Conference in Fort Worth, where I was able to give a presentation to about 700 attendees on the state of the RPSEA research and development program. The responses and results of the development efforts presented by multiple operators in gas fields across the country is truly extraordinary and will require our continued collective process improvement to drive down cost, increase efficiency and maintain integrity.

Finally, we just completed our first full-scale review of the progress of our 2007 Environmental Research projects. Each principal investigator (PI) gave an overview of their progress and project status to all the other PAC and advisory members from our PAC - a total of about 50 folks for two full days. The results were impressive, and the dialogue was good and frank to ensure these projects stay on track and address the necessary actions. Our regular quarterly "QW" Technical Advisory Committee (TAC) meetings perform a similar role, and encourage you to attend next type of interest to you. In conjunction with all these conferences and program management activities, RPSEA recently sat with our partners at NETL for the first full benefits analysis review of 2007 portfolio to assess our public funding by producing results.

Despite the continuing challenges the industry faces, we are pushing ahead with your strong support in advancing technology to maximize the value of our abundant domestic resources.

Nolan Ning  
President

[Back to Table of Contents](#)

**Oilfield** | [Previous Page](#) | [Contents](#) | [Zoom In](#) | [Zoom Out](#) | [Print Cover](#) | [Search Issue](#) | [Next Page](#) | [Single](#)

**GULF OF MEXICO**

**Lower Tertiary focal point of RPSEA R&D initiatives**

John Hudson  
Contributing Editor

Increasing operation costs, and the need to maximize recovery from low-permeability reservoirs, are driving operators to look for new ways to improve recovery. This is especially true in the Gulf of Mexico, where operators are looking for ways to improve recovery from low-permeability reservoirs. This is especially true in the Gulf of Mexico, where operators are looking for ways to improve recovery from low-permeability reservoirs. This is especially true in the Gulf of Mexico, where operators are looking for ways to improve recovery from low-permeability reservoirs.

**Key benefits for stakeholders**  
RPSEA Member 3. National Oil and Natural Gas Research Results Now Available... (text continues)

**E&P**

**SUBSEA OPERA**

Operating in the Deep



## KMD: What is it?

FE's First  
"One Stop Shopping"  
for all Current and  
Historical DOE Oil &  
Gas R&D


More than 30,000  
records and reports  
of R&D in upstream  
oil and gas

The screenshot shows the NETL website header with the logo and tagline "the ENERGY lab Where energy challenges converge and energy solutions emerge". A navigation menu on the left lists categories such as ABOUT NETL, KEY ISSUES & MANDATES, and CONTACT NETL. The main content area is titled "Knowledge Management Database (KMD) Portal" and contains several informational paragraphs and links. A smaller version of the KMD logo is visible on the right side of the page.

Site Map  GO>

**the ENERGY lab**  
Where energy challenges converge and energy solutions emerge

ABOUT NETL  
KEY ISSUES & MANDATES  
ONSITE RESEARCH  
TECHNOLOGIES  
ENERGY ANALYSIS  
NETL-RUA  
TECHNOLOGY TRANSFER  
SOLICITATIONS & BUSINESS  
EDUCATION  
AWARDS & RECOGNITION  
NEWSROOM  
CONTACT NETL



*KMD Portal*

### Knowledge Management Database (KMD) Portal

The KMD was initially created to provide access to project information related to the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999. The KMD has now been expanded to also provide access to current and historical project information relating to Research and Development (R&D) sponsored by the NETL Strategic Center for Natural Gas and Oil (SCNGO).

[Section 999 Project Information:](#) Information specifically related to projects developed in support of the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999 R&D Program, including general project information (abstracts, performers, costs, project summaries), reports and data.

[Oil & Natural Gas Document Repository:](#) Search SCNGO oil & natural gas documents related to current and archived R&D projects, including Section 999. The repository includes DOE/NETL oil & natural gas documents currently posted on the SCNGO internet site, reports stored in the DOE Office of Science and Technical Information (OSTI) library, and selected scanned documents from archived R&D projects. The search is based on keywords of titles and abstracts, and can be further refined by using the author field. More information, including archived project reports and Program documents, is available through the CD/DVD Library link below.

[CD/DVD Library:](#) This library contains a list of CD/DVDs of oil & natural gas research reports compiled from past R&D programs as well as currently available documents from the NETL webpage. The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the NETL CD/DVD ordering system.

[SCNGO Project Summaries \(1990 - present\):](#) The summaries provide comprehensive information on SCNGO-sponsored E&P, environmental, gas hydrate, and transmission and distribution projects. The summaries include background information, accomplishments, the current status of the projects, reports, and links to performer websites.

[Subscribe to Oil and Natural Gas News Releases](#)





# How Do I Use the KMD?

## There Are Now Two Ways

- 1. Accessing SPE's One Petro Website Portal**  
**[www.onepetro.org](http://www.onepetro.org)**
  - It is now possible to search all DOE oil and gas published papers via SPE's archival library
- 2. Or, just enter at the NETL Portal**  
**[www.netl.doe.gov/kmd](http://www.netl.doe.gov/kmd)**
  - This allows access to papers in addition to all other publications, including CD's and DVD's

# SPE's One Petro Website Portal

[www.onepetro.org](http://www.onepetro.org)

**OnePetro** Home | Login | Contact Us | Help View Cart

search options: BASIC ADVANCED SPECIFIC ARTICLE

*A unique library of technical documents and journal articles serving the E&P industry*

Search

Geo Search

What's New?

Find:  In:  Anywhere in Article

AND  In:  Anywhere in Article

AND  In:  Anywhere in Article

Date Range:  Single years, ranges (2000-2005), or before/after (<1990, >2000)

Check all:  ALL

- American Petroleum Institute (API)
- American Rock Mechanics Association (ARMA)
- American Society of Safety Engineers (ASSE)
- International Petroleum Technology Conference (IPTC)
- International Society for Rock Mechanics (ISRM)
- NACE International (NACE)
- National Energy Technology Laboratory (NETL)

Organizations:

- Offshore Technology Conference (OTC)
- Petroleum Society of Canada (PETSOC)
- Society of Petroleum Engineers (SPE)
- Society of Petroleum Evaluation Engineers (SPEE)
- Society of Petrophysicists and Well-Log Analysts (SPWLA)
- Society of Underwater Technology (SUT)
- World Petroleum Congress (WPC)

Sort Results By:  Relevance

Search Reset

ABOUT ONEPETRO

Search

What Is OnePetro?

Document Coverage

Participating Organizations

Corporate Subscriptions

Administrator Access

TOP TEN DOWNLOADS

- [SPE: EOR Screening C...](#)
- [SPE: Mature Field De...](#)
- [SPE: Maximizing Oil ...](#)
- [SPE: A Critical Rev...](#)
- [SPE: Rock Typing I K...](#)
- [SPE: Stimulating Unc...](#)
- [SPE: Stimulating Unc...](#)
- [SPE: Integrated Petr...](#)
- [SPE: EOR Field Exper...](#)
- [SPE: A Survey of Nor...](#)

LATEST NEWS

[Important notice for SPE members](#)



# KMD Portal Page

## 4 Document Repositories

- Sec999 Project Information
- O&G Document Repository
- CD/DVD Library
- SCNGO Project Summaries

[www.netl.doe.gov/kmd](http://www.netl.doe.gov/kmd)

The screenshot shows the KMD Portal page. At the top, there is a navigation bar with the NETL logo, the text "the ENERGY lab", and the tagline "Where energy challenges converge and energy solutions emerge". A search box and a "GO" button are also present. Below the navigation bar is a sidebar menu with the following items: ABOUT NETL, KEY ISSUES & MANDATES, ONSITE RESEARCH, TECHNOLOGIES, ENERGY ANALYSIS, NETL-RUA, TECHNOLOGY TRANSFER, SOLICITATIONS & BUSINESS, EDUCATION, AWARDS & RECOGNITION, NEWSROOM, and CONTACT NETL. The main content area is titled "Knowledge Management Database (KMD) Portal" and contains the following text:

The KMD was initially created to provide access to project information related to the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999. The KMD has now been expanded to also provide access to current and historical project information relating to Research and Development (R&D) sponsored by the NETL Strategic Center for Natural Gas and Oil (SCNGO).

**Section 999 Project Information:** Information specifically related to projects developed in support of the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999 R&D Program, including general project information (abstracts, performers, costs, project summaries), reports and data.

**Oil & Natural Gas Document Repository:** Search SCNGO oil & natural gas documents related to current and archived R&D projects, including Section 999. The repository includes DOE/NETL oil & natural gas documents currently posted on the SCNGO internet site, reports stored in the DOE Office of Science and Technical Information (OSTI) library, and selected scanned documents from archived R&D projects. The search is based on keywords of titles and abstracts, and can be further refined by using the author field. More information, including archived project reports and Program documents, is available through the CD/DVD Library link below.

**CD/DVD Library:** This library contains a list of CD/DVDs of oil & natural gas research reports compiled from past R&D programs as well as currently available documents from the NETL webpage. The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the NETL CD/DVD ordering system.


**SCNGO Project Summaries (1990 - present):** The summaries provide comprehensive information on SCNGO-sponsored E&P, environmental, gas hydrate, and transmission and distribution projects. The summaries include background information, accomplishments, the current status of the projects, reports, and links to performer websites.

[Subscribe to Oil and Natural Gas News Releases](#)





# The Section 999 Technology Transfer Index can be Searched by Program, Projects or Performer



## Section 999 Technology Transfer Index

71 Total Projects  
13 Small Producer Projects  
0 Performer Projects

**Program Element**

Small Producer

**PROGRAM ELEMENT**

PROJECTS

PERFORMER

Field Site Testing of Low Impact Oil Field Access Roads: Reducing the Environmental Footprint in Desert Ecosystems

Performed Particle Gel for Conformance Control

Near Miscible CO2 Application to Improve Oil Recovery for Small Producers

Enhancing Oil Recovery from Mature Reservoirs Using Radial-jettted Laterals and High-volume Progressive Cavity Pumps

### PROJECT SUMMARY

Program Element	Performer
Small Producer	Texas Engineering Experiment Station (TEES)

**Project Title**

Field Site Testing of Low Impact Oil Field Access Roads: Reducing the Environmental Footprint in Desert Ecosystems

Contacts				
PI	Planned Year	Start Date	End Date	
David Burnett	2007	09/03/08	09/02/10	
NETL	Project Cost	Federal Cost	Cost Share	
Chandra Nautival	\$444,839	\$284,839	\$160,000	
CONSORTIUM	Martha Cather			
Contract #	07123-01			

Open Project Factcheet/Information

Open All Outreach Activities

This application allows the user to filter for RPSEA projects by NAME, PERFORMER or PROGRAM ELEMENT. The information displayed shows the research summaries and outreach activities with hyperlinks to open supporting documents.

### OUTREACH ACTIVITIES

Month-Year	Type	Abstract
Jun-2009	Presentation	This Disappearing Roads Competition
	Presentation	Reducing Impacts of Oil & Gas Development on Rangelands
	Presentation	Team Challenge: Environmentally Friendly Drilling Using Low
Mar-2009	Report	Technology Assessment Report

Click on Outreach Activity to view record details

Month-Year	Document Type	Status	Open Record
Mar-2009	Report	Complete	<input type="button" value="Open Record"/>

**Abstract**

Technology Assessment Report

Author	Organization
David Burnett	Texas A&M University

**Forum**

# The Section 999 Technology Transfer Index Can Also be Downloaded in its Entirety

Project				Activity			
Area	Contract Number	Project Title (linked to Summary)	Project Details	Month-Year	Type	Abstract	Activity Details
Unconventional	07122-07	<a href="#">Novel Concepts for Unconventional Gas Development in Shales, Tight Sands and Coalbeds</a>	Performer: Carter Technology PI: Ernest Carter Project Cost: \$114,600 Federal Cost: \$91,680 Cost Share: \$22,920 Start Date: Jul-2008	2/19/2009	Report	<a href="#">Novel Concepts for Unconventional Gas Development of Gas Shales, Tight Sands and Coalbeds - Final Report</a>	Forum: Author: Ernest E. Carter Organization: Carter Technologies Co Status: Complete
Unconventional	07122-09	<a href="#">Application Of Natural Gas Composition To Modeling Communication Within And Filling Of Large Tight-Gas-Sand Reservoirs, Rocky Mountains</a>	Performer: Colorado School of Mines PI: Harris Project Cost: \$1,016,417 Federal Cost: \$670,417 Cos. Share: \$346,000 Start Date: Aug-2008	1/1/2009	Document	<a href="#">Application of Natural Gas Composition to Modeling Communication within and Filling of Large Tight-Gas Reservoirs</a>	Forum: Author: Organization: Colorado School of Mines Status: Complete
				4/6/2010	Presentation	<a href="#">Application of Natural Gas Composition to Modeling Communication within and Filling of Large Tight-Gas Reservoirs</a>	Forum: RPSEA Unconventional Gas Conference 2010 Author: Nicholas B. Harris Organization: Colorado School of Mines Status: Complete
Unconventional	07122-12	<a href="#">An integrated Framework for the Treatment and Management of Produced Water</a>	Performer: Colorado School of Mines PI: Jorg Drewes Project Cost: \$4,017,085 Federal Cost: \$1,560,393 Cost Share: \$2,456,692 Start Date: Sep-2008	10/16/2008	Document	<a href="#">Technology Status Assessment</a>	Forum: Author: Organization: Colorado School of Mines Status: Complete
				11/1/2009	Document	<a href="#">Technical Assessment of Produced Water Treatment Technologies - 1st Edition</a>	Forum: Author: Organization: Colorado School of Mines Status: Complete
Unconventional	07122-14	<a href="#">Comprehensive Investigation of the Biogeochemical Factors Enhancing Microbially Generated Methane in Coal Beds</a>	Performer: Colorado School of Mines PI: Junk Munakata-Marr Project Cost: \$1,246,740 Federal Cost: \$864,333 Cost Share: \$382,407 Start Date: Sep-2008 End Date: Sep-2010		Document	<a href="#">Comprehensive Investigation of Factors Enhancing Microbially Generated Coal Bed Methane - Research Highlights</a>	Forum: Author: Organization: Colorado School of Mines Status: Complete

**Links to Detailed Project Summaries**

**Links to Project Technical Abstracts**





# Main KMD Database Key Word Search

Site Map  GO>

**the ENERGY lab**  
Where energy challenges converge and energy solutions emerge

**NETL**

- ABOUT NETL
- KEY ISSUES & MANDATES
- ONSITE RESEARCH
- TECHNOLOGIES
- ENERGY ANALYSIS
- NETL-RUA
- TECHNOLOGY TRANSFER
- SOLICITATIONS & BUSINESS
- EDUCATION
- AWARDS & RECOGNITION
- NEWSROOM

*KMD Portal*

### Knowledge Management Database (KMD) Portal

The KMD was initially created to provide access to project information related to the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999. The KMD has now been expanded to also provide access to current and historical project information relating to Research and Development (R&D) sponsored by the NETL Strategic Center for Natural Gas and Oil (SCNGO).

**Section 999 Project Information:** Information specifically related to projects developed in support of the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999 R&D Program, including general project information (abstracts, performers, costs, project summaries), reports and data.

**Oil & Natural Gas Document Repository:** Search SCNGO oil & natural gas documents related to current and archived R&D projects, including Section 999. The repository includes DOE/NETL oil & natural gas documents currently posted on the SCNGO internet site, reports stored in the DOE Office of Science and Technical Information (OSTI) library, and selected scanned documents from archived R&D projects. The search is based on keywords of titles and abstracts, and can be further refined by using the author field. More information, including archived project reports and Program documents, is available through the CD/DVD Library link below.

**CD/DVD Library:** This library contains a list of CD/DVDs of oil & natural gas research reports compiled from past R&D programs as well as currently available documents from the NETL webpage. The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the NETL CD/DVD ordering system.

**SCNGO Project Summaries (1990 - present):** The summaries provide comprehensive information on SCNGO-sponsored E&P, environmental, gas hydrate, and transmission and distribution projects. The summaries include background information, accomplishments, the current status of the projects, reports, and links to performer websites.

[Subscribe to Oil and Natural Gas News Releases](#)

Click on the  
“Document Repository” Icon



# KMD Search Page

Search the KMD Document Database

the **ENERGY** lab  
Where energy challenges converge and energy solutions emerge

Site Map GO

KMD Portal > Document Database

Search the KMD Document Database

This search function allows the user to search all documents (e.g., final reports) from past and current R&D projects. This includes reports from the Office of Research and Development and those available via the Office of Science and Technical Information database. The search is conducted by author or key-word search of titles and document abstracts. See our [instructions](#) for additional information.

Keywords or Subject of Interest: **Produced water** And

AUTHOR:

Sort results most recent first

USA.GOV | U.S. DEPARTMENT OF ENERGY | DOE OFFICE OF FOSSIL ENERGY  
DOE OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY | OFFICE OF ELECTRICITY DELIVERY & ENERGY RELIABILITY  
Disclaimer | Privacy Policy | Web Policies | FOIA/Privacy Act | Employees Only

After the Document Database Search page comes up, type in "Produced Water"

<http://www.netl.doe.gov/KMD/FormattedSearchDemo.aspx>[4/26/2010 10:01:29 AM]



# KMD Search Results Page

See results and note  
number of entries returned

the ENERGY lab  
Where energy challenges converge and energy solutions emerge

Site Map  GO>

KMD Portal > Document Database

Search the KMD Document Database

This search function allows the user to search all documents (e.g., final reports) from past and current R&D projects. This includes reports from the Office of Research and Development and those available via the Office of Science and Technical Information database. The search is conducted by author or key-word search of titles and document abstracts. See our [instructions](#) for additional information.

Keywords or Subject of Interest:

AUTHOR:

Sort results most recent first

[Search](#) [Reset](#)

[Next >>](#) Showing Items 1 to 10 of 311

**Title:** Novel Fouling-Reducing Coatings for Ultrafiltration Nanofiltration, and Reverse Osmosis Membranes(301665 bytes)

**Author (Publisher):** Dr. Benny D. Freeman

**Abstract:** Polymeric membranes could potentially be the most flexible and viable long-term strategy for treatment of produced water from oil and gas production. However, widespread use of membranes, including reverse osmosis (RO) membranes, for produced water purification is hindered due to fouling caused by the impurities present in the water. Fouling of RO membranes is likely caused by surface properties including roughness, hydrophilicity, and charge, so surface modification is the most widely considered approach to improve the fouling properties of current RO membranes. This project focuses on the two main approaches to surface modification, coating and grafting. Hydrophilic coating and grafting materials based on poly(ethylene glycol) (PEG) are applied to commercial RO membranes manufactured by Dow FilmTec and GE. Crossflow filtration experiments are used to determine the fouling resistance of modified membranes, and compare



# CD/DVD Key Word Search

**the ENERGY lab**  
Where energy challenges converge and energy solutions emerge

Site Map  GO>

**NETL**

- ABOUT NETL
- KEY ISSUES & MANDATES
- ONSITE RESEARCH
- TECHNOLOGIES
- ENERGY ANALYSIS
- NETL-RUA
- TECHNOLOGY TRANSFER
- SOLICITATIONS & BUSINESS
- EDUCATION
- AWARDS & RECOGNITION
- NEWSROOM
- CONTACT NETL

*KMD Portal*

### Knowledge Management Database (KMD) Portal

The KMD was initially created to provide access to project information related to the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999. The KMD has now been expanded to also provide access to current and historical project information relating to Research and Development (R&D) sponsored by the NETL Strategic Center for Natural Gas and Oil (SCNGO).

**Section 999 Project Information:** Information specifically related to projects developed in support of the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999 R&D Program, including general project information (abstracts, performers, costs, project summaries), reports and data.

**Oil & Natural Gas Document Repository:** Search SCNGO oil & natural gas documents related to current and archived R&D projects, including Section 999. The repository includes DOE/NETL oil & natural gas documents currently posted on the SCNGO internet site, reports stored in the DOE Office of Science and Technical Information (OSTI) library, and selected scanned documents from archived R&D projects. The search is based on keywords of titles and abstracts, and can be further refined by using the author field. **More information, including archived project reports and Program documents, is available through the CD/DVD Library link below.**

**CD/DVD Library:** This library contains a list of CD/DVDs of oil & natural gas research reports compiled from past R&D programs as well as currently available documents from the NETL webpage. The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the NETL CD/DVD ordering system.

**SCNGO Project Summaries (1990 - present):** The summaries provide comprehensive information on SCNGO-sponsored E&P, environmental, gas hydrate, and transmission and distribution projects. The summaries include background information, accomplishments, the current status of the projects, reports, and links to performer websites.

[Subscribe to Oil and Natural Gas News Releases](#)

**Clicking on the  
"CD/DVD Library" Icon**



# Or, Search Only the CD/DVD Database by Keyword

**NETL** the **ENERGY** lab  
Where energy challenges converge and energy solutions emerge

Site Map  GO>

[ABOUT NETL](#)  
[KEY ISSUES & MANDATES](#)  
[RESEARCH](#)  
[TECHNOLOGIES](#)  
[ENERGY ANALYSIS](#)  
[SOLICITATIONS & BUSINESS](#)  
[EDUCATION](#)  
[NEWSROOM](#)  
[CONTACT NETL](#)

KMD Portal > CD DVD Database

### Search the KMD CD/DVD Database

This search function allows the user to search all of the CDs and DVDs of oil and gas research reports compiled from past R&D programs as well as currently available documents from the NETL Internet site (i.e. SCNGO and Section 999, etc.). The user can download individual reports or review an entire CD or DVD. See our [instructions](#) for additional information.

Search KMD CD/DVD Database

The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the [request form on the Shopping Cart](#).

**Major Oil Plays in Utah and Vicinity**  
**Info:** A portfolio of oil plays in Utah, as well as neighboring Colorado and Wyoming, compiled by the Utah Geologic Survey with funding from NETL. The portfolio contains comprehensive maps that provide data useful to organizations involved in petroleum exploration and production. The data includes geologic settings, outcrop analogs, land-use issues, and best-development practices for each oil-producing area within the three states.  
**Date:** 5/1/2009 [PDF Size: 66.7MB](#) | [ZIP Size: 91.8MB](#)

**Focused Oil Technology Programs Archive, Version 1.0**  
**Info:** The Focused Oil Technology Programs archive includes the Native American Program, Independent Producers Program, PUMP Program, PRIME Program, and Technology Transfer Program.  
**Date:** 3/1/2009 [HTML](#) | [ZIP Size: 1.69GB](#)

Note same Key Word search format as before

Note that all CD/DVD's are listed On the first page – they can be:

- 1) Ordered
- 2) Downloaded in their entirety
- 3) Searched for individual papers or reports



# Going Directly to SCNGP Oil and Gas Project Summary Page

**the ENERGY lab**  
Where energy challenges converge and energy solutions emerge

Site Map  GO>

**NETL**

**Knowledge Management Database (KMD) Portal**

The KMD was initially created to provide access to project information related to the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999. The KMD has now been expanded to also provide access to current and historical project information relating to Research and Development (R&D) sponsored by the NETL Strategic Center for Natural Gas and Oil (SCNGO).

**Section 999 Project Information:** Information specifically related to projects developed in support of the Energy Policy Act of 2005, Title IX, Subtitle J, Section 999 R&D Program, including general project information (abstracts, performers, costs, project summaries), reports and data.

**Oil & Natural Gas Document Repository:** Search SCNGO oil & natural gas documents related to current and archived R&D projects, including Section 999. The repository includes DOE/NETL oil & natural gas documents currently posted on the SCNGO internet site, reports stored in the DOE Office of Science and Technical Information (OSTI) library, and selected scanned documents from archived R&D projects. The search is based on keywords of titles and abstracts, and can be further refined by using the author field. **More information, including archived project reports and Program documents, is available through the CD/DVD Library link below.**


**CD/DVD Library:** This library contains a list of CD/DVDs of oil & natural gas research reports compiled from past R&D programs as well as currently available documents from the NETL webpage. The user can download the complete CD/DVD via zip files, or use the interactive webpages to review the content online. Users can also request mailed copies of the media using the NETL CD/DVD ordering system.

**SCNGO Project Summaries (1990 - present):** The summaries provide comprehensive information on SCNGO-sponsored E&P, environmental, gas hydrate, and transmission and distribution projects. The summaries include background information, accomplishments, the current status of the projects, reports, and links to performer websites.

[Subscribe to Oil and Natural Gas News Releases](#)

**Clicking on the  
“Project Summaries” Icon**

# SCNGO Project Summaries Portal


the ENERGY lab
Site Map  GO>

Where energy challenges converge and energy solutions emerge

ABOUT NETL

KEY ISSUES & MANDATES

ONSITE RESEARCH

**TECHNOLOGIES**

Oil & Natural Gas Supply

- E&P Technologies
- Gas Hydrates
- T&D and Refining
- Contacts

Coal & Power Systems

Industrial Capture & Storage

Carbon Sequestration

Hydrogen & Clean Fuels

ENERGY ANALYSIS

NETL-RUA

TECHNOLOGY TRANSFER

SOLICITATIONS & BUSINESS

EDUCATION

AWARDS & RECOGNITION

NEWSROOM

CONTACT NETL



## Oil and Natural Gas Supply Projects

Use the links provided below to access detailed DOE/NETL project information, including project reports, contacts, and pertinent publications.

Natural Gas & Petroleum E & P Technologies	Methane Hydrates
<ul style="list-style-type: none"> <li>• <a href="#">Exploration Technologies</a> - use this link to view entire list of active E&amp;P projects</li> <li>• <a href="#">Reservoir Characterization</a></li> <li>• <a href="#">Advanced Drilling</a></li> <li>• <a href="#">Deep Formations</a></li> <li>• <a href="#">Improved Recovery</a></li> <li>• <a href="#">Low Permeability Sandstones</a></li> <li>• <a href="#">Liquefied Natural Gas</a></li> <li>• <a href="#">Arctic Resources</a></li> <li>• <a href="#">Completed E&amp;P Projects</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">DOE/NETL Methane Hydrate Projects</a></li> </ul>
<ul style="list-style-type: none"> <li>• <a href="#">Environmental Solutions</a></li> <li>• <a href="#">Produced Water</a> - use this link to view entire list of active Environmental projects</li> <li>• <a href="#">Regulatory Streamlining</a></li> <li>• <a href="#">Federal Land Access</a></li> <li>• <a href="#">Completed Environmental Projects</a></li> </ul>	<p style="margin: 0;"><b>Refining &amp; Processing</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Completed Petroleum Refining Projects</a></li> <li>• <a href="#">Completed Natural Gas Processing Projects</a></li> </ul> <p style="margin: 0;"><b>Transmission &amp; Distribution</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Completed T&amp;D Projects</a></li> </ul> <p style="margin: 0;"><b>Storage</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Strategic Petroleum Reserve</a></li> <li>• <a href="#">Natural Gas Storage</a></li> <li>• <a href="#">Completed Natural Gas Storage Projects</a></li> </ul> <p style="margin: 0;"><b>Technology Transfer</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Technology Transfer</a></li> </ul>

# Questions

