

# NEWSLETTER

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August 1995

## **OFFSHORE LEASE ABANDONMENT AND PLATFORM DISPOSITION TO BE ANALYZED AT INTERNATIONAL WORKSHOP ORGANIZED BY CES**

There are over 4,000 offshore platforms and 22,000 miles of pipelines located on the continental shelf (OCS) in the United States. Almost all of these are located in the Gulf of Mexico. Many platforms are 25 or more years old and are approaching their end of service. Between 100 to 150 platforms have been removed from the OCS each year for the past six or seven years, and that trend is projected to continue for the foreseeable future.

Platforms must be removed and disposed of onshore and the site at which they were located returned to its natural state--unless the platform is approved for conversion to an artificial reef under one of the relatively small, state-administered, "rigs-to-reefs" programs.

Current regulations set limits on the explosives commonly used to sever the structural elements of platforms during removal. However, a recent Government Accounting Office (GAO) report alleges these regulations still allow unnecessary environmental damage and do not encourage the use or development of nonexplosive techniques. Industry experts argue that prohibiting explosives will increase costs significantly as well as the risks to their workers.

The figure below summarizes a CES estimate of how much more it would cost to remove existing platforms (not including future installations), if explosives were to be prohibited. The estimates reflect differences in the size and water depth of existing platforms but are quite conservative since they assume that nonexplosive techniques would be as reliable as explosives, which industry experts dispute.

Platforms provide habitat for reef fish that are highly valued by recreational and commercial fishermen. Some estimate oil and gas platforms and pipelines have increased such habitat in the Gulf of Mexico by as much as one third. If platforms continue to be disposed of onshore, this additional habitat ultimately will be lost permanently. Further, it is considerably less expensive for operators to dispose of many platforms offshore rather than onshore.

Some environmentalists favor offshore disposal in order to preserve habitat for marine life, others consider any change in policy that would permit leaving platforms offshore to be unacceptable "ocean dumping."

These and other equally contentious issues will be analyzed and debated at an international workshop CES is organizing that will be held on April 15-17 at the Doubletree Hotel in New Orleans.

Since U.S. lease abandonment policies and practices establish precedents for other countries (where platform removal episodes such as the Brent Spar storage facility in the North Sea already have become controversial and contentious) considerable participation from other countries is anticipated.

Speaking of the workshop in a recent issue of the *Journal of Petroleum Technology* (August, 1995) Bud Danenberg of the Minerals Management Service said "[T]he way this issue is blowing up, we may need a superdome for it."

At the moment, however, we anticipate a maximum crowd of 400 participants who will be divided into "working groups" to discuss issue papers distributed prior to the workshop outlining an important aspect of lease abandonment and platform disposition practices and policies.

The goal of the workshop, according to CES' Allan Pulsipher who will be the workshop chair, is not to try to make policy, that is a job for Congress and MMS, but to put together an up-to-date and balanced foundation for policy in an open and inclusive way. The papers prepared for the conference and a summary of the reaction to them will be published by CES following the workshop.

The cost of the workshop is anticipated to be about \$200,000. The U.S. Department of Interior's Minerals Management Service will underwrite half of this cost. CES is raising the remaining half through conference registration fees and sponsorships by affected states, countries, companies, industries, and foundations. Sponsors will be identified in workshop advertisements and publications, receive waivers of registration for employees they want to attend, and authorized to exhibit. If you are interested in a sponsorship, contact Baumann or Pulsipher for details.

Updated information about the workshop will be available on the Internet. See the "CES On-Line" article for instructions on finding CES' Internet location, then use the appropriate menu selections to get to the workshop page. At this location those interested will also be able to register, request further information, pose questions or issues they would like to see addressed or simply make comments and suggestions.

#### **DR. DAVID DISMUKES JOINS CES' STAFF**

David Dismukes recently became a Research Assistant Professor with the Center. David received his Ph.D. in economics from Florida State University in August of 1995. His specialty is electric utility economics and regulation. David worked, full-time, with the Florida Public Utility Commission as well as private economic consulting firms while in graduate school. The electricity business is changing rapidly and David should help the Center understand and communicate the implications of these changes for Louisiana.

#### **REPORT ON ECONOMIC IMPLICATIONS OF MORE INDEPENDENTS ON OCS COMPLETED**

CES' has completed a report to the MMS on the likely economic implications of independents increasing their share of the exploration and development of oil and gas resources on the OCS. An econometric model was developed and used to see if there is historical support for the widespread apprehension

that OCS resources would be developed less aggressively or efficiently by independents. According to Professor Omowumi Iledare who constructed the model, the measurements of the responses by majors and independents to changes in the principal economic and strategic factors that affect their behavior were quite similar and did not suggest a larger role for independents would make much of a difference. An article based on the research was also published in the July issue of *The Energy Journal*, an academic journal published quarterly by the International Association of Energy Economists.

### **CES ON-LINE**

The Center for Energy Studies is now on the Internet. Point your web browser to <http://www.enrg.lsu.edu>.

Access may be accomplished through an online service such as *America Online*, *CompuServe*, *GENIE*, *Prodigy*, etc., or through an account with a local Internet access provider. Hardware requirements are a fully functional multimedia personal computer with a 14,400 baud or greater modem. Information found there includes a staff directory, a listing of CES publications, CES related announcements, an Industry Associates listing, PTTC related information, and information about the Offshore Lease Abandonment workshop.

The PTTC pages provide a variety of information for operators and producers. The Louisiana natural gas severance index price is posted there at the beginning of each month. Through the courtesy of PDS On-Line Services daily crude oil posted prices are available for six oil transporters operating in Louisiana--Enron, Exxon, Koch, Murphy, Scurlock, and Texaco. Announcements and agenda of upcoming PTTC-sponsored workshops and other meetings of interest also appear there. Louisiana Department of Natural Resources (DNR) approved monthly production report forms are also provided.

We are pleased to announce that CNG Producing Co. Has renewed its financial commitment to CES. CNG funding will be used to support our offshore studies.

### **CENTRAL GULF REGION PTTC UPDATE**

The Central Gulf Region (CGR) of the PTTC has been involved in several projects associated with the transfer of technology. The primary needs expressed by Louisiana operators at the two workshops held thus far were availability of information, availability of the environmental rules and regulations, electronic filing of state forms, and more information on produced water.

The CGR distributed in March 1995 the first version of state forms pertaining to production audit and severance tax reporting. This version is distributed on a 3.5 inch floppy diskette and is available free by contacting the PTTC at (504)388-1804. We plan to release version 2 of the Louisiana State Forms diskette in September 1995, which will add and calculate using WordPerfect 6.1 for Windows or WordPerfect for DOS 5.0 and a laser jet printer. This diskette is also included in the Environmental Handbook release version 1.1 distributed through the Center for Energy Studies or can be downloaded by way of the Internet at <http://www.enrg.lsu.edu/>

The CGR of the PTTC also has developed an "Environmental Handbook". This handbook was developed by LSU's Basin Research Institute and the CGR PTTC. It is formatted on six 3.5 inch diskettes and can be run on any computer with the use of Windows. The Environmental Handbook includes a compilation of Louisiana legislation, Dept. Of Natural Resources rules and regulations, including pipeline safety and coastal management, and Department of Environmental Quality rules and regulations on water, air, radiation and NORM. The Environmental Handbook is for sale for \$40.00 and can be obtained by contacting Keith Long at (504)388-4538 or Barbara Kavanaugh at the CGR PTTC at (504)388-1804.

To address the issues associated with "Produced Water," there will be a workshop held

at 8:00 a.m. on September 28, 1995 in the Cotillion Ballroom of the LSU Union in Baton Rouge.

#### **LMOGA/BROOKSHER SCHOLARSHIP**

Michael Delany, senior geology major with a 4.0 GPA since 1992, was awarded a \$1,500 LMOGA/Brooksher Scholarship. He is a member of several honor societies and Vice President of the local student chapter of the AAPG.

#### **LOUISIANA ELECTRICAL RATE SURVEY**

The Center For Energy Studies conducted a survey of electrical rates in North Louisiana. This study used a sample of six operators representing twenty-five major fields and six different electrical providers. The sampling represented 3.3 MM barrels of oil or approximately 2.5% of total state production.

The preliminary results indicated an average electrical cost of \$0.49 per barrel of oil produced. However, two-thirds of the production used to make this calculation came from one field. Excluding this field, the average cost per barrel was \$1.02. The range for all barrels was from \$0.19 to \$2.78. Electricity costs as a percentage of total lease operating expenses varied considerably from less than 1 percent to 28.7 percent.

The variation in lease operating expenses was indicative of general production efficiency rather than simply electricity costs. Factors affecting costs included: percentage of field production under artificial lift; amount of water produced with hydrocarbons; the electric provider and the operators' management of electric load.

#### **RECENT CES PUBLICATIONS**

**Applied Technology Research Corporation. *Economic and fiscal impacts of the Energy Rated Homes of Louisiana program.* Prepared in association with the Center for Energy Studies, Louisiana State University for the Louisiana Department of Natural Resources, Baton Rouge, LA, March 1995.**

*Report determines the current (pre-program) level of energy efficient mortgage*

*activity in the state; estimates the economic impacts from a successful initiation of the program; estimates the tax revenue impacts of the program and more specifically, the impact on sales tax collections; and estimates the greenhouse gas emission reductions from a successful initiation of the program.*

**Baumann, Robert H.; Kavanaugh, Barbara S.; and Pitcher, Deborah J. *Energy overview and analyses, 1993.* Prepared for Center for Legislative Energy and Environmental Research, Dallas, TX, June 1995.**

*Report provides statistical comparisons and brief narratives of the energy features of each of the member states/province of The Energy Council including reserves, exploration, production, generation, consumption, employment, and economics.*

**Iledare, O. O.; Pulsipher, Allan G.; and Baumann, R. H. *Effects of an increasing role for independents on petroleum resource development on the Gulf of Mexico OCS. The Energy Journal 16(2), 57-76.***

*Paper reports on continuing research on modeling the performance of firms of different sizes in the search for and development of petroleum resources on the Gulf of Mexico OCS. Concludes OCS resources would not be developed less aggressively or less efficiently if independents were to do more of the development.*

**Iledare, O. O.; Pulsipher, Allan G.; and Baumann, R. H. *Empirical supply model of hydrocarbon reserve additions on the Gulf of Mexico OCS.* Presentation before the Institute of Gas Technology, April 3-5, 1995. Atlanta, GA.**

*The paper develops a supply model of petroleum reserve additions using individual company data on drilling and drilling outcomes on the OCS. The model is a combination of an econometric specification of the firm's drilling behavior with the firm's drilling productivity function. The model can be used to forecast the effects of depletion, taxation and economic*

*incentives on petroleum drilling outcomes.*

**Pinsonat, Michelle M., and McKenzie, Lawrence S., III. *A historical perspective of early discussions and negotiations between the United State of America and the State of Louisiana regarding financial arrangements associated with outer continental shelf oil and gas production.* Applied Technology Research Corporation under contract with the Center for Energy Studies, Louisiana State University, Baton Rouge, LA , June 1995.**

*Report identifies and describes research documents that provide insight into the events and parties associated with outer continental shelf jurisdiction and revenue sharing negotiations during the 1940s and early 1950s.*

**Pulsipher, Allan G. *TVA's debt limit. Public Utilities Fortnightly.* March 1, 1995, 39-42.**

*Article concludes that TVA's Congressional debt limit has been largely cosmetic and provided neither accountability nor external control for the federally owned power system. It recommends that Congress amend the TVA act to provide an enlarged, regional, part-time board, clearly separated from managerial decisions, and also remove the ineffectual TVA debt limit.*

**Pulsipher, Allan G. *Comment on the Tennessee Valley Authority Case. Regulating regional power systems,* Clinton J. Andrews, ed. Quorum Books, Westport, CT, 1995, 321-332.**

*Comment analyzes the reorganization of TVA under the chairmanship of Marvin Runyon and the reasons for the renewed commitment to completing the agency's unfinished nuclear power plants that accompanied it.*

**Swanwick, W. Miguel and Baumann, Robert H. *Chronological achievements and requirements of the State of Louisiana, Texaco Global Settlement Agreement of February 22, 1994.* Prepared for Louisiana Department of Natural Resources and the Louisiana State Mineral Board, April 1995.**

*Report describes the major elements of the settlement, which include the payment on the part of Texaco of \$250,000,000 and the further commitment of \$152,250,000 for an economic expansion program. It also summarizes and gives the due date of each of Texaco's commitments.*

## **OTHER CURRENT PROJECTS**

In addition to the projects mentioned elsewhere in this issue, CES personnel are currently involved in the following projects:

Assistance in monitoring the State of Louisiana, Texaco Inc. Global Settlement Agreement - Louisiana Department of Natural Resources.

Replacing Integrated companies with independent producers: implications for coastal/OCS oil and gas development policy - Louisiana College Sea Grant Program and U. S. Minerals Management Service.

Impacts of Act 2 of 1994 (Oil and Gas Incentives). Louisiana legislative requests.

Louisiana's oil spill regulations and programs for platforms and pipelines located in state waters. U. S. Minerals Management Service.

CWEL, First Use and Transportation taxes - legislative actions taken in response to proponents' arguments. Louisiana legislative requests.

Economic background on oysters and oil and gas development - Oyster Damage Assessment Board.

Salt water disposal wells database and maps for coastal wetland parishes of Southwest Louisiana. U.S. Department of Energy.

The environmental and safety risks of increasing activity by independents on the federal OCS. U. S. Minerals Management Service.

Forecasting platforms to be removed, installed and operated on the OCS in the next 25 years. CES Industry Associates.

Estimating the costs of alternative policies for the disposition of offshore platforms - CES Industry Associates.

A strategy for external control and accountability for TVA - In house.

Environmental externalities and the least-cost selection of electric generating facilities - In house.

Nuclear power project disallowances - In house.

Electric Utility Mergers: A Regulator's Guide - In house.

Effects of depletion, taxation and economic incentives on petroleum drilling outcomes of firms of different sizes - Industry Associates.

#### **PRODUCED WATER WORKSHOP AGENDA --SEPTEMBER 28, 1995**

8:00am- 8:45am	Registration
8:45am- 9:00am	Welcome Address
9:00am- 9:15am	Overview of PTTC <b>John Benton</b> , PTTC Project Manager
9:15am- 9:45am	Produced Water: Analyzing the Magnitude of the Problem <b>Clay Kimbrell</b> , Research Associate, LSU
9:45am-10:15am	Produced Water Derivation, Composition, and Management <b>Dr. Dan Caudle</b> , Consultant, Sound Environmental Solutions
10:30am-11:00am	Update of Regulations on Produce Water Disposal <b>Dale Givens</b> , Assistant Secretary, Water Resources, DEQ
11:00am-11:30am	Update on Produced Water Injection <b>Jim Welsh</b> , Director, Injection and Mining, DNR
11:30am- noon	US Department of Energy Production Water Research and Activities <b>Brent Smith</b> , Project Manager, DOE Metairie Office
Noon- 1:15pm	Lunch - Speaker <b>Rep. Jay McCallum</b>
1:15pm- 1:45pm	Economic Evaluations of Produced Water Treatment and Disposal Options <b>Tom Hayes</b> , GRI
1:45pm-2:15pm	Four-Phase Analytical Approach to Solving Water Treatment Problems <b>Uncas Favret, Jr.</b> , President, Engineering Specialties , Inc.
2:15pm- 2:45pm	Downhole Water Disposal Tool <b>Allen Grubb</b> , Senior Operations Engineer, Oxy USA, Inc.
2:45pm- 3:15pm	In-Situ Segregation Production of Oil and Water <b>Mark Swisher</b> , Hunt Petroleum Corporation
3:30pm- 5:00pm	Panel Discussion with all Speakers: Issues and Solutions of Produced Water Management Problems. Moderator: <b>Professor Andrew Wojtanowicz</b> , LSU
5:00pm	Workshop Adjourns; Open House and Exhibits at Petroleum Engineering Research and Technology Transfer Facility.

More information on the workshop content can be obtained by calling Brenda Macon at the LSU Petroleum Engineering Department at (504)388-5215.

**CENTER FOR ENERGY STUDIES  
1 EAST FRATERNITY CIRCLE  
BATON ROUGE, LA 70803-0301**









