The Gulf of Mexico Hydrocarbon Development Project:
A Bi-national Study Background and Project Objectives

Two very different energy industries and regulatory cultures exist on each side of the U.S.-Mexico border. Market diversity is imprinted on the U.S. model, while the Mexican model rests on a diametrically opposed principle: monopoly. These differences have generated dramatically different technical, commercial, and regulatory developments of each nation’s energy sector, making bilateral cooperation in energy development difficult. On August 2013, each of the three main political forces in Mexico presented separate proposals for the nation’s energy reform, adding one more level of uncertainty to the process of developing new possibilities for cooperation and business development on both sides of the border. Energy reforms of some nature are likely in Mexico, and they will have a substantial effect on the way the energy industries in Mexico and the United States will interact. The purpose of this project is to examine the legal and regulatory environments in Mexico and the United States, to enhance the possibilities of more effective cooperation between oil and gas producers and energy regulators in both countries.

Despite the dramatic dissimilarities in their respective regulatory regimes, the discovery of potentially huge quantities of shared hydrocarbon resources in the vicinity of the US-Mexico maritime boundary in the Gulf of Mexico has compelled the governments of the two nations to reflect on their differences and to seek ways to reconcile them. International industry practices have proven that collaborative efforts, in which distinct industrial models and regulatory cultures are harmonized, can provide pathways toward successful development of shared hydrocarbon resources.

With decreasing production from Mexico’s easily accessible onshore and offshore hydrocarbon fields, and with growing demand in the United States for more drilling in the GOM, technological advances in exploration and exploitation have led to drilling further into the Gulf of Mexico and into ever deeper waters, at least on the U.S. side. Between three billion and 15 billion barrels of oil may be recoverable in the deep-water area of the GOM that is open to U.S exploitation, making it the biggest U.S. discovery since Prudhoe Bay in Alaska nearly forty years ago. Meanwhile, Mexico has estimated more than 30 billion recoverable barrels on its side of the maritime border.

PEMEX, the Mexican national oil company that holds a monopoly on oil and gas production, lacks the technology and know-how to carry out deepwater oil and gas exploration, so the Mexican side of the Gulf remains largely unexplored. In contrast, significant quantities of hydrocarbons are currently being produced on the U.S. side of
the maritime boundary in a number of widely dispersed deepwater plays. The Mexican and U.S. governments have expressed special concern over the potential production of oil and gas in an area known alternatively as the Perdido Foldbelt or Alaminos Canyon Region, located about 150 miles east of Brownsville, Texas. Commercial production in this region has caused unease, particularly in Mexico, because of the possible existence of hydrocarbon reservoirs that may straddle the existing maritime boundary between the two nations.

The possibility that production on the U.S. side of the boundary may siphon oil from Mexico triggered a series of diplomatic negotiations over ten years ago to address these concerns. As a result of these discussions, on February 20, 2012 the US and Mexico took an important first step towards reaching a collaborative solution regarding shared hydrocarbon resources by signing the Agreement Between the United States of America and the United Mexican States Concerning Transboundary Hydrocarbon Reservoirs in the Gulf of Mexico (the “Transboundary Treaty”). The Transboundary Treaty is aimed at establishing a collaborative relationship between the United States and Mexico concerning possibly existing oil and gas transboundary reservoirs in the Gulf. As a result of the application of the Transboundary Treaty, U.S. - Mexico interaction over the development of offshore resources in the Gulf will intensify, thereby resulting in potentially significant legal, institutional and regulatory gaps, conflicts, as well as opportunities for cooperation. Unfortunately, the Transboundary Treaty itself, and the government agencies that the Treaty will engage, are ill-prepared to address the potential conflicts in regulation.\(^1\)

The objective of the Gulf of Mexico Project of the Center for U.S. and Mexican Law is to undertake a comprehensive review of the issues associated with jointly developing offshore hydrocarbon resources in the deep-water areas of the Gulf of Mexico, in order to provide a framework and mechanism to better coordinate operational, safety and environmental policies for offshore hydrocarbon development. This objective will be accomplished through the development of a series of White (working) Papers and associated professional events that will promote binational cooperation on offshore hydrocarbon policies, and will recommend the most effective steps needed to implement the Transboundary Treaty and to improve energy development and environmental protection in the Gulf of Mexico.

A series of studies and professional workshops will identify the most important potential areas of regulatory uncertainty and conflict, and will propose solutions that can guide U.S. and Mexican decision-makers to better manage and reconcile the differences in regulatory culture that currently exist. Among the topics that these studies and workshops will address include the principles governing shared hydrocarbon resources;

\(^1\) The Transboundary Treaty has been ratified by Mexico, but still awaits the advice and consent of the Senate before the United States can ratify. If the United States does not ratify the Treaty, the concerns that will be addressed in this Project will not disappear, because the geography and natural resources of the Gulf of Mexico will not have disappeared. The importance of this Project may well be magnified, in fact, since we plan to take a bi-national approach that will benefit cooperative solutions to problems of developing the shared resources of the Gulf.
changing institutions and cultures of offshore management; and harmonizing safety and
environmental standard in offshore operations.

The strength of the Center’s Gulf of Mexico Project lies in the binational nature
of the effort. Leading academics in both the United States and Mexico will undertake
independent analyses that are sensitive to the cultural and legal differences that exist
between the countries. Neither the U.S. nor Mexico has been party to an international
agreement to jointly develop hydrocarbon resources that extend across international
boundaries. Consequently, they will have to develop a completely new set of regulatory
structures capable of governing the unique set of issues common to international
unitization agreements. A variety of problems will likely emerge, ranging from
differences in leasing philosophies to conflicts in internal governing practices and
disagreements on how disputes need to be resolved. Although the Transboundary
Treaty provides some guidance, its text is as notable for what it lacks as for what it
contains. It was clearly the intention of both nations to leave some sections of the treaty
indefinite and ambiguous so that details could be clarified in later negotiations or
developed through state practice.

The proposed project will attempt to anticipate many of these problems and will
bring together high-level government, industry, environmental and academic
representatives from the U.S. and Mexico, with the objective to recommend the most
effective steps forward to implement the Transboundary Hydrocarbon Treaty. Our goal
will be to identify, in both governmental and non-governmental sectors, where
innovative new efforts may provide a framework for a more sustained and systematic
approach to developing and wisely managing the transboundary hydrocarbon resources
in the Gulf. This binational effort to put into place shared rules, more effective best
practices and stricter safety and environmental standards will improve the lives of
citizens in both nations and serve as a model for broader cooperative efforts in the
future.

Project Theoretical, Practical and/or Policy-Related Significance

The significance of finding better ways to sustainably manage offshore
hydrocarbon resources in the Gulf of Mexico cannot be overestimated. Despite strong
efforts to conserve use and develop renewable sources of energy, the U.S. will continue
to rely on carbon-based energy sources for the foreseeable future. Economically, the oil
and gas industry in the U.S. portion of the Gulf of Mexico Region currently employs
nearly 110,000 workers with total wages estimated at over $12 billion. Production in
the shallow and deep waters of Gulf of Mexico supplied 30 percent of U.S. domestic oil
production in 2009. The economic importance of hydrocarbon production is even
higher in Mexico, where the oil and gas industry accounts for about 35 percent of
government revenue.
Environmental aspects of a well-managed offshore industry may be even more significant to the citizens of the two nations. The recent Macondo oil spill in U.S. waters and the earlier Mexican Ixtoc spill in 1979 had catastrophic environmental consequences. A major oil spill event in the maritime boundary region of the Gulf would inevitably have transboundary effects. In addition to potentially causing damage to coastal areas, any spill in the maritime boundary region of the Gulf may affect newly discovered and highly productive deepwater chemosynthetic benthic communities as well as globally important nursery areas for blue fin tuna, among other ecologically important attributes.

The recent Transboundary Treaty between the U.S. and Mexico shows that it is in both nations’ self-interest to find a framework efficiently and effectively to develop and manage the transboundary hydrocarbons in the Gulf. However, drafting an international treaty is only the first step toward the safe, efficient and equitable commercialization of these resources. Offshore transboundary resource exploitation triggers a broad range of challenges that the two nations have not dealt with in the past. Parties seeking to develop hydrocarbons pursuant to the treaty will face significant cultural differences in their approach to everything from leasing practices, drilling processes, partnership agreements, contract negotiation, taxation and securities regulation, safety and environmental protection standards and bureaucratic rulemaking, just to name a few.

Energy reform in Mexico will have a substantial effect in exploiting resources in conformity with the objectives of the Transboundary Treaty. Currently, Mexican law does not permit Pemex to share hydrocarbon resources with any company, be it private or state-owned, and as a result, Pemex has had a very limited experience in collaborating with other oil companies or foreign energy agencies. Energy reforms would likely change this, allowing closer collaboration with foreign companies, but also the prospect of greater competition. If reforms are made, companies operating on the US side of the Gulf of Mexico would be interested in expanding their activities to the Mexican side, creating a context of much greater interaction between national regulatory agencies and companies.

The new regulatory environment in the Gulf of Mexico presents particular challenges for both Mexico and the United States. Despite being a major oil exporting nation, the Mexican hydrocarbons industry has been until recently, relatively unregulated. Since all hydrocarbon production was subject to a government monopoly, Mexico ignored the need for regulation until 2008, when it created the National Hydrocarbons Commission, to regulate upstream oil and gas development by Pemex. Unfortunately, the Commission’s limited legal powers and its budgetary dependence on the Secretary of Energy have hindered its capacity to enact and enforce substantive regulation in matters concerning offshore block awards, offshore development plans and industrial safety regulations.
In the light of these reforms, the Gulf of Mexico Hydrocarbon Development Project becomes of notable importance. On the Mexican side of the equation, research performed on the various contractual instruments used in international offshore hydrocarbon experience will be of great use to Mexican decision-makers. The independent studies to be produced over the next three years will provide information and analysis to benefit private actors as well as governmental regulators. These studies will be disseminated as broadly as possible, to encourage discussion, through binational forums. The proposed project will provide a method to begin the process of setting up the institutional and legal frameworks to move forward in a mutually beneficial fashion.

Plan of Work

The Project will be carried out in phases and will include a combination of scholarly studies and binational workshops. Each of the studies will serve as a foundational document for a series of expert’s workshops that will be held in Houston and Mexico City. This will be an incremental process in which the first report serves as blueprint that provides broad themes and examples of policies that promote or hinder collaboration between the two nations. This first phase is currently underway, and we expect the First Phase research to produce a preliminary report no later than November 2014. The second and subsequent reports will provide more detailed analyses of specific topics. Examples of these topics – to be refined after the end of the First Phase – include the following:

- possible development of joint safety and environmental standards;
- possible development of best practices for unitization agreements;
- possible development of effective dispute resolution mechanisms for disputes involving either private enterprises, publicly-owned companies such as Pemex, and government agencies.
- possible development of improved methods and opportunities for dialogue between U.S. and Mexican regulators

These activities will be guided by Project Co-Directors, Doctor Richard McLaughlin and Guillermo J. Garcia Sanchez, and will draw upon expertise and resources located at the institutions that are collaborating with the Center for U.S. and Mexican Law in carrying out this project:

- The University of Houston Law Center (UHLC) is an excellent place to host this Project, due to the strength of UHLC’s Environment, Energy and Natural Resources Center, and UHLC’s outstanding law faculty in this area. The directors will employ gifted law students with an interest and background in energy and natural resources law, to provide the research assistance for the studies.
The Harte Research Institute for Gulf of Mexico Studies, located at Texas A & M University/Corpus Christi, is the home institution of Dr. McLaughlin, a leading center on environmental and resource management for the Gulf of Mexico.

The phased studies fall into three broad categories. These include:

**Phase One: Principles governing shared hydrocarbon resources:** A research paper in which US and Mexican scholars identify such principles, under international and domestic law, and analyze the feasibility of their implementation, given the existing differences in regulatory culture. Differences in how the U.S. and Mexican legal systems treat shared natural resources will be highlighted to better understand how these issues may impact the successful implementation of future offshore hydrocarbon unitization agreements.

**Phase Two: Institutions, Contractual Instruments and Regulatory Environments**

**Institutions governing offshore operations:** The research papers will address which aspects of institutional and regulatory culture must be managed and reconciled in order to maximize cooperation between agencies. Both the US and Mexico are undergoing an important period of reflection concerning the institutional design and purpose of their offshore regulatory agencies. In the aftermath of the devastating Macondo spill, The U.S. Department of Interior’s Minerals Management Service, the federal agency in charge of regulating offshore hydrocarbon production, was reorganized into the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) and a moratorium on offshore drilling was enacted so that new rules could be developed to avoid future oil spill disasters.

As noted above, Mexico’s regulatory structure for energy is in its infancy, and with the prospect of imminent energy reform, Mexico will experience a crucial period of review of its industrial model and its institutional setting. If Mexico does permit foreign enterprise to engage in hydrocarbon development, via production-sharing contracts with companies that would be peers of Pemex, the country would need an entirely new institutional setting to govern offshore activities, including those governing shared hydrocarbons resources. In this process, the studies to be carried out under this Project will be useful to both scholars and decision-makers.

**Contractual Instruments and Dispute Resolution:**

The Transboundary Treaty must be implemented by way of diverse types of agreements. Such agreements include a Unitization Agreement, by which companies engaged in operating on either side of a shared hydrocarbon reservoir will exploit the resources in an equitable manner. Due to the competitive nature of the oil and gas industry in the United States, there is extensive experience in the negotiation and
execution of these agreements. Such experience is lacking in Mexico, however, due to the Pemex monopoly. Since neither country has experience in negotiating and executing international unitization agreements, the studies performed in this Project will provide guidance to both countries regarding the challenges and technical steps required to reach a workable exploitation of resources.

Due to the complexities involved in the oil and gas agreements, the resolution mechanisms to be employed in case of disputes are of particular importance. Technical, administrative and legal dispute resolution mechanisms should be carefully established in the agreement. This Project will include an analysis of the best international practices regarding dispute resolution mechanisms in countries with distinct industrial, institutional and contractual cultures.

Phase Three: Safety and environment: Following the Macondo oil spill, Mexico issued its first “minimal” offshore safety rules. The US has a longer safety and environmental regulation record and yet important questions and concerns remain. For example, it is unclear how important regulatory changes triggered by the Macondo disaster, such as the introduction of Safety and Environmental Management Systems (SEMS) and stricter environmental assessment requirements, will be applied in a transboundary setting. Transboundary Treaty provisions mandating common environmental standards and cross-boundary enforcement are untested and may also be problematic. The focus of this research will be to point out the main differences in the two countries’ cultures for safety and environmental protection, to propose a path towards regulatory harmonization. The Macondo Oil spill also had an effect on Mexico, as awareness arose of the risks involved in deep water exploration and production. After the Macondo spill, Mexico’s National Hydrocarbon Commission issued its first set of safety regulations applicable to Pemex, which reacted adversely to the regulations, raising issues regarding regulatory enforcement. This Project will analyze possible regulatory modes in the light of the possibilities of enforcement, and the legal, administrative and cultural barriers which may hinder regulatory effectiveness. The Project will also analyze the possibility of regulatory harmonization.

Each of these scholarly studies will be reviewed by recognized experts and will then serve as foundational references for discussion in a series of expert workshops. The workshops will serve to solicit the views of knowledgeable professionals from the United States, Mexico and possibly from other nations, to develop a set of recommendations that can be used to effectively implement the Transboundary Treaty process. Through plenary and break-out group discussions, workshop participants will identify existing deficiencies and challenges for potential action and determine the most effective steps toward developing a framework for strengthened cooperation and effective management of transboundary hydrocarbon resources in the Gulf of Mexico. Both US and Mexican experts will attend the Workshops to be held in both Mexico and
in the United States. An interchange of regulatory experience will be of particular value to widen the knowledge and understanding of the challenges faced by either country.

**Anticipated Results**

During the three-year period beginning January, 2014, the Project will produce three White Papers, each incorporating comments and advice garnered from preliminary reviews of the White Papers and suggestions received from each workshop. Each White Paper will provide necessary background; a detailed description of the problems associated with transboundary development of shared hydrocarbon resources; will identify potential areas of policy and regulatory uncertainty and conflict; and will propose potential solutions to be considered. Each white Paper will be translated into both Spanish and English. The White Papers will reflect the perspectives of the U.S. and Mexican authors and contributors, as well as collective views from both nations on the opportunities to bridge legal and institutional differences in regulatory cultures.

We will hold workshops for experts, including industry and government regulators, with simultaneous translation, in both Houston and Mexico City. Workshop participants will engage in intensive bi-national dialogue to identify, synthesize and prioritize issues of concern and develop a set of recommendations for governmental and industry decision-makers. Recommendations to reduce legal, institutional, or cultural obstacles and barriers to implementing the Transboundary Treaty will be developed. Innovative co-management approaches will be investigated, as well as a menu of best practices, improved legal instruments, and more effective institutional and governance arrangements. The University of Houston Law Center and the Harte Research Institute for Gulf of Mexico Studies (HRI) will use their extensive network of collaborators to help identify participants at the appropriate management level in order to provide accurate insight into the decision making calculus.

**Specific Plan for Dissemination of Results**

The academic institutions collaborating in this project – the University of Houston Law Center and the Harte Research Institute of Texas A & M – will work with other institutions to disseminate widely the results of this unique, bi-national research project. We plan to publish the White Papers on the websites of the institutions collaborating in this Project. In addition, we will work with academic journals in the United States and Mexico to organize symposiums that will attract published commentary by experts, both from academic and from professional backgrounds. The University of Houston Law Center is party to a Mutual Cooperation Agreement with the Mexican Ministry of Foreign Relations, and we will ask the Ministry to sponsor a high-level meeting dealing with the subjects covered in the White Papers.