SUMMARY FOR PAPER #4
Friday, October 2, 2009 (4:40 P.M.)

THE FUTURE OF OIL AND GAS CONSERVATION:
THE PAST IS PROLOGUE

by

Professor Thomas A. Mitchell

Colorado and Pennsylvania, like parallel universes, provide strikingly different examples of how external forces affect the evolution of oil and gas conservation jurisprudence originating from a common starting point. This jurisprudence includes both “Classical” oil and gas conservation—measures to prevent waste of the oil and gas resource, and “Values” oil and gas conservation—measures that address the effects of oil and gas development on other resources. By comparing the two states along the continuum of 150 years of production, regulation, related legislation, and case law addressing oil and gas conservation, this paper emphasizes specific points along this time line to highlight important political and historical forces at work in the two states. What emerges today are two states with a number of superficially similar regulatory structures in place, but at polar opposites in the development of a political and jurisprudential response to vastly different industries, economies and populations. The differences between the two states are likely to result in vastly different outcomes for oil and gas conservation for each state and for the future jurisprudence of broadly defined oil and gas conservation regulatory structures that may evolve in other states.

Pennsylvania

Pennsylvania became the progenitor of the oil and gas industry 150 years ago with the success of the Drake well. By 1901, Pennsylvania had produced over half of the then global demand for oil. The state’s robust and politically savvy oil and gas industry of independent producers had fought prolonged battles with Standard Oil and lived to tell the story. Pennsylvania’s courts had articulated and shaped the fundamentals of the common law of oil and gas. The surface effects of oil production were well known and accepted as a sign of economic progress. As Pennsylvania entered the 20th Century a property interest in the oil and gas estate was second to no other property interest or value as an economic activity in the state.

When oil discovery and production moved westward, Pennsylvania’s production dominance entered a prolonged decline alleviated only by the burgeoning local demand for natural gas. By the 1920s, local demand for natural gas eclipsed the importance of oil to Pennsylvania’s economy. The oil and gas industry evolved into stripper well production, dependent on a low cost environment both for production and associated regulation. Although
there was piecemeal regulation of plugging and abandonment practices, the national evolution of a modern oil and gas conservation regulatory environment passed by Pennsylvania. Then, in 1961, the state legislature adopted a modern Model Code classical conservation statute. However, the power of the independent producers ensured that the statute specifically excluded all formations above the Onondaga formation. These exempt formations constitute the vast majority of past, present and the foreseeable future oil and gas production in the state. Thus, all important oil and gas production remains subject to the law of capture as enunciated by the Pennsylvania courts over one hundred years ago. For producers who have come to rely on the ability to space, force pool, and other benefits of final agency determinations concerning a common source of supply, the absence of a known regulatory environment is an extraordinary factor in committing to a drilling program.

The rise of federal environmental regulation prompted Pennsylvania to create a Department of the Environment (“DEP”) and companion legislation in 1984. For the first time, all new oil and gas development in Pennsylvania was subject to a general set of environmental regulation. The 1984 act for the first time required permitting and bonding for the drilling of new oil and gas wells. Over the past two decades, the growth of the environmental movement and urbanization has increased the number and intensity of conflicts under the 1984 Act between local government regulation and state regulation. For example, in response to a case upholding the application of local land use controls to oil and gas development, the legislature acted to make clear its intent to completely preempt local regulation of oil and gas development. Also, conflicts between the surface estate and the oil and gas estate have been on the rise, including conflicts involving the state as a surface owner of state parks. The Pennsylvania Supreme Court recently applied the 1893 *Chartiers* case, upholding the rights of the dominant mineral estate against efforts by the State to require advance negotiation of surface use agreements in state parks.

The advent of horizontal drilling for gas in the Marcellus shale has completely changed the complexion of gas development and the nature of the gas industry in Pennsylvania. The Marcellus formation may be the most important and prolific gas play in the United States. The geographic reach of productive Marcellus shale extends beyond areas of past production, involving surface use and resource conflicts on a scale not previously experienced. Water, both produced and fresh for fracking, is an especially sensitive issue. Traditional stripper well stimulation operations required just 40-60 thousand gallons of water compared to 3-6 million gallons for new Marcellus production. Allocations of water in the two major river basins covering the vast majority of the Marcellus formation are subject to the control of interstate compact commissions whose constituencies are not solely coincident with Pennsylvania.

Moreover, funding of regulatory positions in the existing state DEP, long a source of concern, have been aggravated by budget shortfalls and a programmatic commitment to getting permits out the door. The presence of out of state entities, with standing to address water quality standards, reflects the importance of these river basins to the Chesapeake Bay. As Pennsylvania
enters the third month of a new fiscal year without a budget, the absence of either a severance tax on oil or gas production or the ability of local governments to assess ad valorem taxes on oil and gas as real property, increases pressure on the state to place its own public lands and parks under lease to meet budget constraints.

The absence of growth and evolution of oil and gas common law because of the absence of cases before the courts for the last 100 years makes much of the precedent in Pennsylvania of questionable value for reliance on by new operators, both in areas of lease interpretation and as between mineral owners engaged in modern production techniques. Open questions, such as liability for subsurface trespass by cross lease line fracturing with no ability to force pool, or space production by commission order, creates legal and economic uncertainty. The Legislative response is uncertain as game changing surface rights legislation makes its way through the legislative process along party lines. In short, the unique history of Pennsylvania’s oil and gas industry and conservation regime is running head long into a boom comparable only to what followed the original Drake discovery well.

**Colorado**

A Pennsylvania driller discovered Colorado’s first oil field three years after the Drake discovery well, placing Colorado alongside Pennsylvania for the claim of birthplace of the oil and gas industry. Differing from Pennsylvania, both by its distance from markets and in volume of production, Colorado’s production history is one of a gradual rise to importance as a major national producer. Its early history of regulation largely mirrors the path of Pennsylvania until the early 1950’s. At that time Colorado independent operators’ fears of the economic power of the majors was partially overcome when the Colorado legislature adopted an abbreviated version of the model act. After the inadequacy of the abbreviated act was revealed, the legislature swiftly replaced it in 1955 and entered the mainstream of oil and gas conservation by adopting the full model act.

In its early days, Colorado’s political structure as a regionally important, but nationally minor producer reflected the importance of oil and gas production to a largely rural economy, reliant on the extractive industries. But as Pennsylvania was becoming increasingly a stripper well industry after World War II, Colorado’s oil and gas production accelerated. While Pennsylvania’s population and economy shrank in relative terms after the war, Colorado entered into a period of exponential growth, both in its diversity of economic growth and in its population. Coincident with a boom in population growth along Colorado’s Front Range, the oil shock of the 1970s drove exploration in the Julesburg Basin-- and specifically the Walsenburg field-- straight into the path of the new western urbanism. Efforts by local government entities to regulate oil and gas development as “Home Rule” cities through land use planning ran into increasing well density patterns. This resulted in judicial involvement, legislative responses and rule making addressing both the impacts of oil and gas development on other resources and coordination with local government.
The shift from minor conventional gas development in the San Juan basin of Colorado to CBM production set the ground for Western slope involvement and the rise of a new property owner, represented by the new recreational class. In this environment, as the Colorado Commission struggled with how to move from a pure classical regulatory role, the conservation act’s statement of purpose which expressly adopts a balancing of other values came to the fore. Eventually however, both the efforts of the Commission and the judicial branch’s case-by-case analysis of preemption of local regulatory efforts were eclipsed by the political force of new western urban political interests, represented by diverse information age and recreational development economy.

The fate of the traditional oil and gas political coalition was sealed by the loss of its traditional allies-- the ranchers and wildlife communities. Where ranchers previously looked to the occasional bonus or royalty payment as the means to continue a traditional life style, the increased density drilling of the Piceance Basin and the Roan Plateau came into direct conflict with both traditional ranching and with the promise of ever increasing recreational property values for western slope land. At a time when gas revenues represented its largest historical share of state revenue, the percentage of residents employed in the gas fields was dropping relative to the overall workforce. The State had already changed the purpose of its school lands trust to put wildlife and wilderness conservation values above maximization of trust revenues. It was not surprising, then, that the legislature adopted sweeping reform of its Oil and Gas Conservation Act in 2007, passing companion legislation to make the correlative rights of wildlife and surface owners co-equal with that of the oil and gas estate. This same legislative package set Commission rule making on a fast track, which overwhelmed industry efforts to ameliorate this change in the law. The rule making was authorized for legislative review in 2009 and the rules were approved by the general assembly without revision this year.

The Prologue

In Colorado, the new legislation and rule making has been described as revolutionary, without precedent, and the most intensive and prescriptive in the nation. Because of the level of taxable production, both at the state and local level, funding for implementation and enforcement is plentiful for the immediate future. However, as the drop in natural gas prices has set in this year, the numbers of APDs have dropped substantially. More ominously, drill rig counts are down sharply over last year. This drop in drill rig counts can be seen throughout the intermountain west, leading to questions about whether it is due to Colorado’s reforms or general economic conditions. There is also reason to doubt that the legislative reforms will necessarily result in less conflict with local regulatory efforts, even though the drop in tax revenues, employment, property values, and leasing activity as a result of the ongoing recession or regulatory reform may temper the appetite for local regulation.

In Pennsylvania, the drill rig count is going up faster than anywhere in the country, bucking all national trends. Leasing activity and the bidding up of bonus payment and royalty
amounts is creating a Wild West frenzy in Pennsylvania, as an impoverished rural population considers the tradeoffs between clean water, traditional hunting and fishing activities, and the promise of payoffs bigger than anything Atlantic City ever offered. Pennsylvania is at the cusp of a new boom with a political and regulatory structure almost as antiquated as its thousands of unregistered and unplugged wells from the 19th Century. Colorado is at the ready for a new age in oil and gas conservation, but it remains to be seen how the various constituencies will play their cards.