My name is Mike Miller. I reside at 204 Teal Court, Kingsport, Tennessee (37663). I am a petroleum engineer and a licensed professional engineer and am currently a senior vice president with Cardno, Ltd., an international consulting and services firm with Pennsylvania offices in Pittsburgh, Philadelphia, Scranton, Harrisburg and York. I learned of this meeting last week after arriving in the area to visit with family and am speaking today as a concerned individual, not as a representative of my company.

As a youth, I worked in conventional oil drilling and production operations in McKean County, Pennsylvania and in Cattaraugus County, New York. After college, I taught high school math and science in Bradford, McKean County, before returning to school to obtain a graduate degree in petroleum engineering. Since then, I have been employed for 33 years in the petroleum industry with Getty Oil Company, Texaco, Equitable Resources (now EQT), and DTE Energy, prior to my current employment. With EQT, based in Pittsburgh, I served as an engineering manager and then as vice president - production.

Over the past 10 years as a consultant, I have provided services to oil and gas companies, landowners, accounting and legal firms, and financial institutions. I am extremely knowledgeable about all aspects of the petroleum industry, including its risks. Environmental services comprise a significant percentage of my employer’s business and, in fact, Cardno was the principal environmental contractor for the BP oil spill cleanup in the Gulf of Mexico. In the environmental area, I have reviewed properties for The Nature Conservancy, prepared and certified Spill Prevention plans for produced oil and water facilities, and determined and certified carbon credits under protocols of the Chicago Climate Exchange.

I have worked on numerous conventional oil and gas, Marcellus Shale, and Utica Shale projects in Pennsylvania and in adjacent areas in Ohio and West Virginia, including in Warren County where this meeting is being held. Last year alone, I worked on oil and gas reserve and valuation projects in the Commonwealth, developed a degasification plan for an underground coal mine in Indiana County, and testified as an expert at trial in energy-related cases in both Greene and Indiana counties.

Based on knowledge and experience, I believe that bringing Pennsylvania’s conventional oil and gas industry under the same regulatory requirements as the unconventional shale industry is both illogical and counter to the economic best interests of the Commonwealth. Current regulations already provide for safe and environmentally sound operations by the conventional oil and gas industry, including protection of valuable water resources. Imposition of pointless additional regulations and their high compliance costs on conventional oil and gas operators would only serve to close businesses and eliminate many jobs in already economically-depressed northwest Pennsylvania.

Although unconventional shale development has greatly benefitted Pennsylvania and our nation by providing abundant supplies of low-cost, clean-burning natural gas, it does entail greater risk than conventional oil and gas development and requires more regulatory control. However, no additional regulations are needed for conventional oil and gas development. The conventional oil and gas and unconventional shale industries are totally different in both scale and accompanying risks. Consider the following:
1. A typical conventional well is 500 to 4,000 feet deep. A typical shale well is drilled 5,000 to 8,500 feet deep and then another 4,000 to 8,000 feet horizontally.

2. A new conventional well typically produces between 1 and 20 barrels of oil per day and/or between 10 thousand and 100 thousand cubic feet of gas (Mcf) per day. Compare that to new horizontal shale wells, which initially produce between 5 and 15 million cubic feet of gas (MMcf) per day and, in liquids-productive areas, can produce from hundreds to thousands of barrels per day of oil, condensate and/or natural gas liquids.

3. The typical pressure in a conventional well is between 50 and 500 pounds per square inch (psi), compared to pressures from 3,000 to 5,000 pounds per square inch in Marcellus and Utica Shale wells.

4. A conventional well costs between $60,000 and $250,000. A horizontal shale well typically costs $6,500,000.

5. Up to 60,000 gallons of water are typically used to hydraulically fracture a conventional well, compared to between 5 and 10 million gallons of water in a horizontal shale well.

6. Companies drilling conventional wells in Pennsylvania are mostly locally owned and operated, are frequently family-run businesses, and commonly have assets from a few thousand to several million dollars. Horizontal shale development is mostly conducted by out-of-state companies like Exxon Mobil, Chesapeake, Shell, Talisman, Range, Chevron and Cabot, each with market caps from many billions to trillions of dollars.

Need I say more? The comparisons are stark. Both the conventional and unconventional industries provide and can continue to provide tremendous benefits to the Commonwealth. However, they conduct vastly different types of operations and should be regulated accordingly.

Do we really want to drive locally owned and operated companies out of business and eliminate hundreds or thousands of jobs while not providing any discernible benefits to the Commonwealth? And this would occur while the large foreign and out-of-state companies continue to operate unfettered due to their much greater financial resources.

Consider this analogy. Would it make sense to regulate and monitor construction of single-family homes in the same manner as construction of 30-story commercial office buildings? Of course not! It would drive the cost of new homes beyond the reach of most potential home buyers and cost many jobs in the home construction industry. This is analogous to what would be accomplished in the Pennsylvania oil and gas industry by the proposed regulatory changes.

Thank you.

Michael J. Miller, P.E.
Kingsport, Tennessee