

June 12, 2001

**Statement Of Virginia Lazenby for The
Independent Petroleum Association Of America
and The
National Stripper Well Association
and**

California Independent Petroleum Association	Louisiana Independent Oil & Gas Association
Colorado Oil & Gas Association	Michigan Oil & Gas Association
East Texas Producers & Royalty Owners Association	Mississippi Independent Producers & Royalty Association
Eastern Kansas Oil & Gas Association	Montana Oil & Gas Association
Florida Independent Petroleum Association	National Association of Royalty Owners
Illinois Oil & Gas Association	Nebraska Independent Oil & Gas Association
Independent Oil & Gas Association of New York	New Mexico Oil & Gas Association
Independent Oil & Gas Association of Pennsylvania	New York State Oil Producers Association
Independent Oil & Gas Association of West Virginia	Ohio Oil & Gas Association
Independent Oil Producers Association Tri-State	Oklahoma Independent Petroleum Association
Independent Petroleum Association of Mountain States	Panhandle Producers & Royalty Owners Association
Independent Petroleum Association of New Mexico	Pennsylvania Oil & Gas Association
Indiana Oil & Gas Association	Permian Basin Petroleum Association
Kansas Independent Oil & Gas Association	Petroleum Association of Wyoming
Kentucky Oil & Gas Association	Tennessee Oil & Gas Association
	Texas Alliance of Energy Producers
	Texas Independent Producers & Royalty Owners Association
	Wyoming Independent Producers Association

Good morning, Chairman Bartlett, members of the subcommittee. My name is Virginia Lazenby, Chairman and CEO of Bretagne G.P., and I am delighted to be here today on behalf of the Independent Petroleum Association of America (IPAA), the National Stripper Well Association (NSWA), and 33 cooperating state and regional oil and gas associations representing over 5,000 oil and natural gas producers in 35 states. IPAA welcomes the opportunity to testify on the important role we believe oil and natural gas research and development programs play in the advancement of a viable, sustainable national energy policy.

To put our story in the proper context, IPAA's membership constitutes both large and small independents. IPAA focuses exclusively on exploration and production. The independent

producing community contributed 50 and 65 percent, respectively of domestic petroleum and natural gas production in the lower 48 states, both on-shore and offshore. Nationwide, the U.S. oil and gas "upstream" or exploration and production industry employed 336,400 as of May 1st, of this year. My company, Bretagne G.P., produces from low volume, high cost stripper or marginal wells. We are one of the largest employers in Lee County, Kentucky with 36 employees, with a payroll of \$850,000 annually, providing full health insurance, dental insurance and a 401(k) for all employees. I personally have been in the oil and gas business formally since 1977, but really "grew up" in the business (my father served as President of Spur Oil.)

Ensuing Industry Challenges

The recently released report issued on May 17th by Vice-President Cheney's Task Force on National Energy Policy Development (NEPD), addressed both the nation's short and long term energy needs. We believe the report adequately portrays the challenges the oil and natural gas industry will face in the ensuing years, in meeting estimated supply and demand. The report quotes numbers issued by the Energy Information Administration (EIA) estimating that by the year 2020, the United States will need about 50 percent more natural gas and one third more oil to meet growing demand. The report further suggests that, "the remaining U.S. oil reserves are becoming increasingly costly to produce because much of the lower-cost oil has already been largely recovered. The remaining resources have higher exploration and production costs and greater technical challenges because they are located in geologically complex reservoirs (e.g. deepwater and harsh environments.) The report goes on to say that, "the nation will have to rely on natural gas from unconventional resources, such as tight sands, deep formations, deepwater and gas hydrates. Also, many resources are in environmentally sensitive areas that require use of less intrusive technologies."

Meeting this formidable set of challenges will be complicated by events in the recent past that dramatically affected the producing community. Due to the plummet in oil and gas prices in 1998 and 1999, many independents who fought to stay in production were ultimately forced to cap their wells (domestic production was cut by half a million barrels per day), victims of low market prices and lack of adequate investment capital.

This collateral damage of low oil and natural gas prices on the industry is affecting supply today and will continue to do so, until the industry has a chance to recover. For example, the upstream industry lost 65,000 jobs in 1998-99. While about 65 percent of those losses have been recovered, skilled workers, burned by the '98 - '99 downturn and the volatility of the related job market are slow to return. Less obvious, but equally significant, during the low price crisis equipment was cannibalized to keep operating and support industries from being decimated. Although the producing community is currently on the rebound, it will take time to develop the infrastructure again to build new drilling rigs and provide the skilled services that are necessary to rejuvenate the industry, which leaves areas such as research and development in many instances the last to receive support, financial or otherwise. Ironically, it is strides made within the R&D community in recent years, through programs such as those administered through the Department of Energy's (DOE) Office of Fossil Energy that can be critical to many producers' economic survival. My personal experience and that of many of my marginal, or "stripper" well colleagues in the industry is that the current price of oil is most helpful, but price alone does not save fields - - technology was and is a necessity.

The application of new techniques has allowed oil and gas production in geological areas never previously thought accessible: increased accuracy of drilling operations not only provides opportunities for increased recovery of product, but allows the drilling procedure to be conducted in a much cleaner and environmentally sensitive manner. Areas of advancement, including "slimhole" drilling, directional drilling, 3-D seismic technology, deepwater drilling technology, and including such "futuristic" advances as high powered lasers and directional drilling (enabling wells to be drilled long horizontal distances from the drilling site) are being fully utilized today.

Many exploration and production R&D advancements are documented in the Department of Energy's report, "Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology." Quoting from the report: "In the past three decades, the petroleum industry has transformed itself into a high-technology industry. Dramatic advances in technology for exploration, drilling and completion, production, and site restoration have enabled the industry to keep up with the ever-increasing demand for reliable supplies of oil and natural gas at reasonable prices." The report further states, "The domestic oil and gas industry will be challenged to continue extending the frontiers of technology. On going advances in E&P productivity are essential if producers are to keep pace with steadily growing demand for oil and gas, both in the United States and worldwide. Continuing innovation will also be needed to sustain the industry's leadership in the intensely competitive international arena, and to retain high-paying oil and gas industry jobs at home. Progressively cleaner, less intrusive, and more efficient technology will be instrumental in enhancing environmental protection in the future."

Stepping Up To the Plate

According to the National Energy Policy report, "anywhere from 30 to 70 percent of oil and 10 to 20% of natural gas is not recovered in field development . It is estimated that enhanced oil recovery projects, including development of new recovery techniques could add about 60 billion barrels of oil nationwide through incremental use of existing fields." Bretagne is a prime example of the contribution that wisely invested R&D dollars can make in the advancement of enhanced oil recovery technologies. For example: utilizing a nitrogen "huff and puff" (cyclic) process. Bretagne increased production from a mature Appalachian basin reservoir from 200 bopd to 500 bopd with no significant increase in water production, breathing "new life" into an old field. The cumulative recovery through May 2000 was 115, 000 bbl of oil from cumulative injection of 342 MMcf of nitrogen. The conventional huff and puff applications have concentrated on using a solvent (such as steam or carbon dioxide). Applications often are limited by two factors - economic availability of the primary injectant and the mechanisms of the huff and puff process itself. This patent - pending huff and puff process using nitrogen addresses both concerns, allowing for full extraction of the resource, but in a cost affective manner. Our nitrogen project has recovered 240,000 additional barrels of oil and we expect to recover 1,700,000 barrels which is 4.5% of original oil in place (this patent is owned by Bretagne) Most recently, Bretagne has partnered with Penn State in the development of a "chamber lift", a technology for producing stripper oil wells. The technology addresses the problem faced by the operator of how to upgrade the production systems at a low enough capital cost that the typical well can show a reasonable economic return on investment. It accomplishes this by injecting gas into the oil column via a small diameter tubing string that is set in the production tubing: the gas then displaces the accumulated fluid to the surface via the annular space between the injection string and the production string. The process is controlled using a sensor and motor valve located

at the surface. Using a laboratory prototype of the system as a test, pressure and flow measurements obtained will be used as input data to a hydrodynamic computer model that will provide to the well operator insights with respect to the field test, demonstrating the viability of the process.

Bretagne has successfully participated through the years in public - private partnership efforts, through groups such as the Stripper Well Consortium (SWC), an industry - driven entity that is focused on the development, demonstration and deployment of new technologies needed to improve the production performance of natural gas and petroleum stripper wells. The SWC is comprised of natural gas and petroleum producers, service companies, industry consultants, universities, and industrial trade organizations. The Strategic Center for Natural Gas, the National Petroleum Technology Office (both under the purview of DOE's Office of Fossil Energy) and the New York State Energy Research and Development Authority provide base funding and guidance to the consortium. By pooling financial and human resources, the SWC can economically develop technologies that will extend the life and production of the nation's stripper wells.

Programs such as the Petroleum Technology Transfer Council (PTTC), a joint public-private partnership between the independent producing community and DOE, and the SWC provide badly needed research and development capital, facilitating the development and application of tools the industry needs to pursue a commodity that produces the lifeblood of our nation's overall economic health and security, domestic oil and natural gas.

The "Bottom Line"

For the foreseeable future, the nation will be dependent on fossil fuels. In particular, petroleum and natural gas currently account for approximately 65 percent of the nation's energy supply - and will continue to be the significant energy source. Natural gas demand, for example, is expected to increase by more than 30 percent over the next decade. The development of any domestic energy policy must recognize this reality. Therefore, in order to meet the nation's projected growth and demand estimates the oil and gas industry must be allowed to utilize the tools necessary to meet the public's consumptive needs. Oil and natural gas research and development holds the key to the maximum utilization of the resource base, in a manner that represents as few environmental consequences as possible. We believe that these goals are not mutually exclusive: a viable, sustainable energy future can and must include environment compatibility as a key component, in order to enjoy any sort of future at all: we believe it all can be within our reach.