Service permissible worker radon standards were higher than the gas well radon measurements. Analytical data indicated that most oilfield-related radioactivity was associated with radium, not uranium. By 1954, radioactive precipitates were documented in eight Texas and two Louisiana gulf coast salt dome oilfields, but uranium deposits were not found. Oilfield-specific uranium research slowed down after the 1950s, but renewed interest in Louisiana salt domes in 1969-71 resulted in regional study but no successful uranium discoveries.

THE PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION: AFTER WWII

Ihor Bemko

Dept. of History, Politics, Languages and Cultures Edinboro University of Pennsylvania 219 Meadville Street, Edinboro, PA 16444 IBEMKO@edinboro.edu

The Pennsylvania Grade Crude Oil Association (PGCOA) was founded in 1923 as a trade association of producers, refiners and jobbers in western New York and Pennsylvania, eastern Ohio, and West Virginia. Its earliest efforts covered marketing of motor oils, "policing" (filing legal cases against firms that sold other oils as Pennsylvania products), and research in production and refining of petroleum. During World War II, the Association supported the war effort through research in refining and aircraft lubrication issues. Members, also, contributed to scrap drives and gasoline rationing programs.

At the end of the conflict, new challenges arose. The economics of the Oil Region (declining production, small refineries, etc...) put the oilmen in a difficult political position. For example, during the war, the U.S. government put in place a stripper-well subsidy, but after August 1945, major oil company leaders wanted to end it, because they saw it as a potential threat to the Oil Depletion Allowance, which provided hundreds of millions of dollars in tax breaks to the largest producers, but little to Appalachian producers. Pennsylvania oilmen went along with the Majors.

The process continued during the 1950s, as major firms lobbied the U.S. government to embrace policies which favored them, at the expense of small producers, refiners, and marketers of petroleum products. For example, by the late 1950s, financial problems led to the sale of the Association's Bradford production lab, and production research increasingly shifted to producing firms. One highlight of this period was the celebration of the centennial of Col. Drake's discovery well. Members of the association retained BBD&O, the legendary advertising firm, to coordinate activities, which in-

cluded Dave Garroway broadcasting NBC's Today show from the grounds of the Drake Well Park on August 27, 1959.

This paper traces the work of the PGCOA from the end of World War II through the beginning of the "energy crisis" in the late 1960s. The association's members attempted to keep their "place in the sun" in a business environment that seemed to grow increasingly brutal. It is based largely on papers deposited at the Drake Well Museum Archives at Titusville. Other material includes newspapers, books and pamphlets published by Pennsylvania State College and state and national government agencies, and secondary sources.

MARATHON – WHERE IT FIRST BEGAN IN NORTHWEST OHIO TO A FORTUNE 500 COMPANY TODAY.

LuAnne Cooke 451 Snow Trail, Findlay, Ohio 45840 Lucooke1@gmail.com

KEYNOTE ADDRESS

This is the story of an Ohio oil company, from 1887 to the present, from the early wildcatters, to dealings with John D. Rockefeller, the effects of a Supreme Court decision, the formation of an integrated oil company, and finally to a split of downstream and upstream sectors forming today's Marathon Petroleum Company and Marathon Oil Company. This is also the story of a father who came out of WWII having his heart set on farming, but during the war, the barn where the farm equipment was stored caught on fire. The Ohio Oil Company was where this young father started into business as an Ohio Oil distributor and his kids rode in the delivery truck in the summer.

A BRIEF HISTORY OF THE UTICA – POINT PLEASANT SHALE PLAY OF OHIO

Jeffrey C. Dick
Dept. of Geological and Environmental Sciences
Youngstown State University
One University Plaza, Youngstown, Ohio 44555
jcdick@ysu.edu

The Utica – Point Pleasant shale play, known simply as the "Utica" has a rich and interesting history that has unfolded over the past five years. The first Utica wells were drilled by Chesapeake Appalachia in Carroll and Harrison Counties in 2011. These wells proved significant natural gas, natural gas

liquids (NGL) and volatile oil production and with it, a new Ohio "oil boom" began. During the two years that followed; crude oil, volatile oil, natural gas liquids (NGLs) and dry gas production zones were delineated by approximately four hundred wells drilled by twenty different operators in seventeen different counties of eastern Ohio. These different production zones correspond to the thermal maturity of the Utica and correspond to the structural elevation of the underlying Trenton Limestone. Exploratory wells in the shallow westernmost crude oil portion of the play proved uneconomic while concentrated drilling in deeper areas to the east defined the early core of the play as the NGL producing or wet gas zone in Carroll, Columbiana and Harrison Counties. By the end of 2013 the Utica had produced one hundred and fourteen billion cubic feet gas and more than four million barrels of volatile oil. During this time the construction of gathering systems and transmission lines could not keep pace with drilling as the number of drilling rigs climbed and drilling efficiency continually improved.

A number of independent factors had a profound influence on the development of the Utica beginning in June 2014. The decline of crude oil prices had a lasting impact on unconventional drilling and production throughout the United States and the Utica. Rig count in the Utica peaked at fifty-five in December 2014 and declined to just seven rigs by June 2016. Insufficient takeaway and processing capacity of NGLs shifted the focus of drilling activity from the wet gas zone to the highly productive dry gas zone of Belmont and Monroe Counties. It is not uncommon for dry gas wells in Belmont and Monroe counties to produce more than eight billion cubic feet in the first two years of production. Such production is linked to long laterals, a greater number of frac stages, abnormal formation pressures and controlled production.

The Utica can be considered a mature shale play with strong upside potential in the coming years. Cumulative production through 2016 stands at nearly three trillion cubic feet of gas and fifty three million barrels of oil extracted from more than fifteen hundred wells. The anticipated completion of the Royal Dutch Shell ethane cracker in Monaca, PA along with the prospect of additional ethane crackers along the Ohio River will provide the needed ethane processing capacity to stimulate renewed production within the wet gas or NGL rich zone of Carroll, Harrison and Noble Counties as well as the wet gas zone of the Marcellus in Pennsylvania and West Virginia. The change of political climate in Washington D.C. in favor of domestic oil and gas development will stimulate drilling and production as pipeline construction increases takeaway capacity from Ohio and the Appalachian basin.

FEARLESS FREDDIE THE LONG AND AMBITIOUS CAREER OF FREDERIC M. PRENTICE, INTERNATIONAL OIL MAN

Kathy J. Flaherty 969 Willow Drive, Pittsburgh, PA 15237 kjflaherty@msn.com

Other than an occasional casual mention, oil history has overlooked one of the most bold and colorful characters ever to drill the oil sands of Appalachia. Among the many distinctions held by Frederic M. Prentice (1823-1913), the earliest is the fact of his birth as the first non-native American born in Port Lawrence, later called Toledo, Ohio. Perhaps it was his pioneer youth spent on the edge of the American wilderness among native Americans, or maybe it was his acceptance of the responsibility for the family business at age 13 that helped Prentice to develop into the strong and brave man well-known among his contemporaries in the early oil fields - but somehow not well remembered in most oil history references. Although a stop on the Allegheny Valley Railway was named Prentice Station in his honor, it was never a thriving metropolis, and is now merely a vacant crossroads on the Justus Trail about a mile north of Franklin, PA.

Even before his initial foray into the new Pennsylvania oil fields in 1861, Prentice was not averse to financial risk, and had already made and lost a fortune. A sincere and confident man, he promised to, and did repay every creditor with interest. Prentice was not afraid of tackling any chore that stood in the way of accomplishment. He took leases, oversaw drilling and production, laid pipelines and grew his business into a successful operation. Not intimidated by having to tangle with Standard Oil, Prentice stood firm and built his own refineries. He embraced learning and sought to understand every aspect of the oil industry, including geology. Noting the geological similarities and trends, Prentice extended his successful oil operations from west-central Pennsylvania into West Virginia and Kentucky, aggressively leasing prospective land. Prentice associated with others who shared his initiative and his drive. He partnered with George H. Bissell and others to form Central Petroleum Company in the mid-1860s, for example. By the late 1860s, Prentice was laying the groundwork for his future petroleum exploration in Peru.

Prentice's ventures were not limited to the petroleum industry; he was president of the Steptoe Silver Mining Company, had extensive lumber and coal holdings, and operated the well-known Prentice Quarries on the Shores of Lake Superior that supplied cities with the popular "brownstone" building material and even the 110-foot tall sandstone monolith for the 1892 Chicago World's Fair, which – in true Prentice style