1. The southern tier of counties across New York and the northern tier of counties in Pennsylvania. Principal prospective zones are Middle Devonian (Onondaga) and Silurian reefs and Silurian (Tuscarora) sandstones at medium depths.

2. A four-county area in east-central New York, southeast of Syracuse, where Ordovician Oswego and Juniata clastics and Silurian Herkimer sandstones wedge out updip toward the north and east.

3. A 2-15 mi wide subcrop belt of Rose Run Sandstone (Ordovician) that trends in an arcuate pattern across east-central and northeastern Ohio, northwestern Pennsylvania, and western New York.

4. The northeast-trending "Rome trough" fault system of eastern Kentucky and southwestern West Virginia. Thick Cambrian clastic sections are the principal targets. Extensions of this major structural feature southwestward across Kentucky and northwestward across West Virginia to Pennsylvania are being pursued by seismic means.

5. Anticlinal trends in central and eastern Pennsylvania and northern West Virginia. Here fractured reservoirs will be sought along prominent structural features, especially in the Tuscarora Sandstone and the Onondaga-Oriskany sections.

6. Shallow Medina-Clinton (Silurian) areas of eastern Ohio, northwestern Pennsylvania, and western New York.

7. The entire southwest-trending Valley and Ridge province from central Pennsylvania to northeastern Alabama. This area is compared structurally with the prolific gas-producing foothills belt of Alberta, Canada. There are multiple objectives in Cambro-Ordovician rocks and a possible linear extent of potential gas fields along this trend. Also the Beekmantown-Cooper Ridge section, fractured or dolomitized Trenton carbonates may be found productive.

WILSON, E. N., Kentucky Geol. Survey, Lexington, Ky.

STRATIGRAPHIC FRAMEWORK OF RELATIVELY UNEXPLORED SECTION, DEVONIAN TO BASEMENT, EASTERN KENTUCKY

Most of the rocks of Cambrian through Devonian ages in eastern Kentucky change from miogeosynclinal in the southeasternmost part to cratonic as they rise northwestward onto the Cincinnati arch. All the systems show thinning and beveling toward the arch, and the Cambro-Ordovician shows additional post-Knox pre-Chazy beveling from south to north, apparently reflecting a different pre-Cincinnati arch paleogeography. Middle and Lower Cambrian rocks have fullest representation of finer clastics and carbonates in the fault-bounded "Rome trough."

Oil and gas, apparently indigenous, have been obtained from rocks of Early and Middle Cambrian ages.

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TECTONICS OF FOLDED APPALACHIANS OF PENNSYLVANIA AS DEDUCED FROM ANTHRACITE REGION

The Anthracite region is the site of several *décollements*, many large fold systems, and numerous thrust, reverse, and bedding faults. A few of these structural features extend southwestward into Maryland and West Virginia.

Detailed surface and mining data in the Anthracite region and less-detailed data in the areas on the southwest suggest that the Folded Appalachians of Pennsylvania are characterized by *décollements* that formed at widespread well-defined changes in rock competency. Originating at and rising from each *décollement* are numerous folds and faults.

Competent rocks between two *décollements* commonly are flexed into large simple fold systems and are displaced by a relatively few large faults. In contrast, incompetent rocks between *décollements* are flexed characteristically into extremely complex fold systems cut by numerous small faults. The *décollements* functioned as stress adjustment zones separating differentially deforming blankets of relatively competent rocks from relatively incompetent rocks.

Many of the larger anticlines appear to have formed in overlying rocks where a *décollement* ramped upward through a part of the sedimentary rocks section.

The Folded Appalachians of Pennsylvania probably are separated at depth from the Precambrian basement by a master *décollement*.

Northwestward gravity sliding induced by vertical uplift of the core of the Appalachians and supplemented by lateral compression as the core moved upward seems the most logical explanation for the tectonics of the Folded Appalachians of Pennsylvania.

IS THERE A GAS SHORTAGE?

(Senator Hansen of Wyoming entered this article into the U. S. Senate Congressional Record, June 5, 1972.)

It is now common knowledge that U. S. companies have signed agreements with foreign nations such as Algeria, Libya, and Venezuela for buying liquefied natural gas and importing it into the United States at delivered prices much higher than the price of domestically produced natural gas.

Also, it is no secret that U. S. companies have the blessing of the U. S. Government in negotiating with the Soviet Union for not only the purchases of huge amounts of liquefied natural gas but also for the financing and construction of the facilities to transport the gas to a Russian port, liquefaction plants, and the ships necessary to bring the gas to this country.

These same companies and others are also planning to build multimillion-dollar plants to produce synthetic gas from naphtha and crude oil and also coal gasification plants that will require huge capital outlays. The cost of this gas will be four or five times the present cost of natural gas.

All of these plans are intended to supplement a dwindling supply of the cleanest and most convenient—and underpriced—of all fuels, natural gas.

For the past several years, the Nation's use of natural gas has far outrun additions to reserves through new discoveries and we are now faced with the grim prospects of actual shortages and shutdowns in some of the most populous areas of the country, including Washington, D.C.

The Federal Power Commission, in long overdue action to establish more realistic wellhead pricing policies for natural gas, has been questioned as to whether there is actually as gas shortage by Members of both bodies of Congress and, in fact, another Agency, The Federal Trade Commission last year began its own investigation of the gas shortage at the insistence of a congressional committee.

In the meantime, the gas shortage and the impending energy crises are, as one writer put it, being "studied to death."

Even the Ford Foundation is now in the act with a $2 million grant for an energy policy project.

Last year a group representing the American Association of Petroleum Geologists' 15,000 members came to Washington in an effort to alert Congress and Federal officials to the seriousness of the oil and gas shortage. In that group was Dr. Sherman A. Wengerd, professor of geology at the University of New Mexico and now president of AAPG.

They came to Washington because they were concerned with what they termed the looming specter of dropping from an energy "have" to a "have less" Nation.

They told me during their visit: "It seemed to be almost beyond the comprehension of the people we conferred with that the U. S. could soon experience a real energy crisis."

Dr. Wengerd only a few days ago issued another statement that was published by the Oil Daily which was highly critical of some who have questioned the FPC's findings of a gas shortage.

I would not subscribe to Dr. Wengerd's charges of demogoguery to those who questioned the FPC but I do believe his remarks, in view of the seriousness of the gas situation, are worthy of attention by all Senators.

Men like Dr. Wengerd and other members of AAPG know