

Harmony, South and Hovey, West, are in Posey County. Six wells in the New Harmony, South, field produced 66,422 barrels of oil. A third field, Cato, in Pike County, did not market the oil from its discovery well during 1944. Several wells discovered oil in the Henderson field of Jay County along the Ohio state line. An important south extension of the St. Thomas field in Knox County was discovered during the year. Active drilling took place in the Inman, East and Upton fields, Posey County, both discovered in 1943. Twenty-two wells in Inman, East produced 151,191 barrels in 1944 and 12 in Upton 107,052 barrels. Owensville, and especially Owensville, North, in Gibson County, made large gains in production as a result of active drilling. The Dodds Bridge field in Sullivan County continued good production from deep sands reached in 1942.

The Griffin continued to be the largest producer among the oil pools of Indiana, accounting for 2,004,180 barrels, or more than 40 percent of the state's output. The next largest producing fields were Mt. Vernon and New Harmony, both in Posey County.

The largest gas well brought in during 1944 was in the Rockport field, Spencer County, and had an initial output of 2,680,000 cu. ft. per day. The most productive gas fields in Indiana were Rockport, Spencer County; Greensburg, Decatur County; and Unionville, Monroe County. Total production in the state is hard to estimate as considerable gas is consumed in farm homes, etc., and never is reported. Some oil from the Trenton field is also used locally and is unreported from pipeline runs.

A total of 606,145 feet of new hole was drilled in Indiana in 1944. Most of the completions were in Posey and Gibson counties, although wells were drilled in 36 different counties. During 1944 there were 331 completed wells. Of these, 145 found oil in commercial quantities and 28 were gas wells. The initial production of the 145 oil wells was 11,908 barrels per day. Settled production would, of course, be less. The largest wells reported during the year were two on the J. W. Mann farm in the Mt. Vernon field with a flush flow of 500-800 barrels each.

Six pools, all small "one well" affairs, were abandoned in 1944. These were Fleenor and Patoka in Gibson County, Grafton and Rapture in Posey County, Vaughn in Vanderburgh County and Millersburgh in Warrick County.

DEPARTMENTAL WORK

The cooperative research agreement with the Ground Water Division of the United States Geological Survey, instituted in 1935, was continued during 1944.

As in previous years, the Department of Conservation cooperated with the United States Geological Survey in a topographic mapping program, wherein each sponsor furnished \$25,000.00 per year. Mapping of the quadrangles is done by engineers from the Federal Survey, and assistants who are residents of Indiana. The finished maps are compiled and published in Washington. The Divisions of Geology and Engineering have charge of the selection of areas to be mapped. Mapping under the new program is done on the scale of 2 inches per mile, approximately, and each quadrangle, or map, is 7½ minutes of arc square. The new,

larger scale of these maps and the accuracy of the work done by the United States Geological Survey, make these maps very valuable. They are the most accurate maps of their kind in the world, and their utility in highway construction, flood control, state and city planning, exploration for oil and coal, and many other types of endeavor, cannot be overestimated. Mapping has been completed in the Southern area of the state, and work in other areas is progressing as rapidly as possible. During 1944, several more quadrangles were completed and published. At the end of the fiscal year the supervision of this work was transferred from the Division of Geology to the Division of Water Resources.

OFFICE WORK

Routine office work has consisted mainly of answering correspondence, identifying rocks and minerals brought or sent in by owners or finders, and supplying information to many hundreds of geologists, oil and gas operators and others interested in oil and gas production and prospecting.

Many hundreds of mineral specimens and rocks are identified each year by members of the Division. Such specimens, many of which the owners believe to contain valuable minerals, are usually rather common materials. They include calcite, quartz, iron ores, pyrite, mica, etc. The Division welcomes these requests and members of the staff are always glad to be of service.

Many requests are received each year from individuals and companies interested in developing, or, in the possibilities of development, of the various mineral resources of Indiana. These include stone, sand and gravel, coal, oil and natural gas, iron ore, marl, peat, ground water, mineral waters, mineral wool, moulding sands, clay, kaolin, dolomite, etc. In many instances the Division is called upon for information concerning the status of mineral industries already established in Indiana.

Other requests for information upon all branches of geology include caves, fossils, physiography, topography rock garden material, geology of the state parks, state forests, selection of sites for fishponds and reservoirs, etc.

PUBLICATIONS AND INVESTIGATIONS

The Annual Report upon the oil and gas Industry in 1944 was submitted to the American Institute of Mining and Metallurgical Engineers for publication in their proceedings. Reprints are available in this office. In addition to the above, work was begun on a series of articles on the geology of the State Parks, published in "Outdoor Indiana". Work was continued on the sub-surface structure of the Devonian and other research topics. The 1945 Indiana Legislature appropriated \$4,000 for investigations of the kaolin or Indianaite deposits in Lawrence County. This work will be undertaken as soon as trained personnel becomes available.

STATE MUSEUM

The Division of Geology supervised the State Museum located in the basement of the State House until the end of the fiscal year June 30, 1945, at which time the museum was transferred to the Division of Lands and Waters.