

four dry holes completed in water bearing Oriskany sand. These tests are located within a distance of one mile east and west and indicate the possibility of a stratigraphic trap along the western limit of the sand in that area.

The position of the Oriskany sand in the series of Devonian and Silurian limestones and dolomites called the "Big Lime" and its possible correlation with the Austinburg sand in Ashtabula County are discussed.

8. "Kanawha-Jackson Oriskany Gas Field," by *A. H. McClain*.

The Kanawha-Jackson Oriskany Gas Field is in Kanawha and Jackson counties, West Virginia. The main pool extends north from Charleston in a broad tapering belt 15 miles wide at Sissonville and 2 miles wide in northern Jackson County. The Blue Creek pool is 8-12 miles above Charleston in a band 4 miles long and 3 miles wide. The Boone County-Campbells Creek pool is on the Warfield anticline 6 miles south of Charleston in a belt 12 miles long and 3 miles wide. On January 1, 1948, the total area was 193,000 acres and the total gas produced was 721,482,555 MCF. At that time 1,239 wells had been completed to the sand, of which 1,076 were saved as gas wells and 163 were dry holes. The 1,076 gas wells have produced an average of 737,269 MCF per well. It is estimated that the field is 75-80 per cent depleted, and that the ultimate production will be 910,000,000 MCF, an average of 4,715,000 MCF per acre.

9. "Mayfield Pool, Cuyahoga County, Ohio," by *Howard E. Rothrock*.

The Mayfield gas pool, most prolific Newburg "sand" pool in Ohio, is in northeastern Cuyahoga County. The rocks that have been tested by drilling range from Upper Ordovician to Upper Devonian. Outcrops include rocks of Upper Devonian and Mississippian age. They are extensively covered by Pleistocene and Recent deposits. Gas and a small amount of oil is obtained from the Newburg "sand" (Middle Silurian) at an average depth of 2,875 feet, and from the Oriskany sand (Lower Devonian) at a depth of about 1,800 feet. The reservoir is of the structural type in the Oriskany sand and of a combined structural and porosity type in the Newburg "sand." The structure is incompletely outlined because of Pleistocene cover at the surface and restrictions on drilling south and southwest of the pool. At the surface it is dome-like with limbs dipping about 0° - $18'$. In the subsurface it appears to be a broad anticline trending northeast with a known closure of approximately 100 feet. Its southeast limb dips about 0° - $38'$. Fifty-two tests, eleven of which were dry holes, have been drilled on the anticline. The total yield of gas, as of December 31, 1947, has been about $13\frac{1}{2}$ billion cubic feet from wells showing a distribution ratio of 30 acres per well. The chances of obtaining oil or gas from deeper Ordovician and sub-Ordovician strata are considered to be chiefly dependent on the amount of closure that occurs in the structure in these deeper strata, and on the porosity of the rocks.

10. "Philosophy of Research," by *E. R. Weidlein*, Director, Mellon Institute of Industrial Research.

Banquet address.

11. "Salina-Guelph Fields of Southwestern Ontario," by *W. A. Roliff*.

The dolomites of the lower part of the Salina formation and the upper part of the Guelph-Lockport formations, of Silurian age, comprise the most important and most prolific gas-productive zone in southwestern Ontario, total production to date amounting to 275 billion cubic feet. This zone has also yielded 1,500,000 barrels of oil. Commercial production was first obtained in the Salina-Guelph zone in the year 1889, and by 1906 the two most important Salina-Guelph fields in the Province had been discovered. Subsequent exploration has been very sporadic, and although eight relatively moderate-sized pools have been discovered, 10,000 square miles, or 80 per cent, of the area underlain by these formations remains relatively untested.

Folding and faulting appear to be the dominant factors controlling accumulation, but reefs, variations in porosity and incipient fracturing seem to be almost equally important.

This paper describes the geological conditions affecting accumulation and the recently renewed efforts to find additional pools in this zone, and briefly discusses the prospects for future discoveries.

12. "Geology and Occurrence of Oil in Medina Sand of Blue Rock-Salt Creek Pool, Ohio," by *James F. Swain*.

13. "Rose Hill Oil Field, Lee County, Virginia," by *Byron N. Cooper*.

Commercial production of high-gravity paraffine-base oil from Middle Ordovician limestones beneath the Pine Mountain overthrust block was initiated in 1942 in the Fourmile Window near Ewing, Lee County, Virginia. Drilling activities since May, 1946, have been sufficiently successful to