

DINNER MEETING—JANUARY 9, 1984

CHAPMAN CRONQUIST—Biographical Sketch



Chapman Cronquist is an independent oil and gas consultant in Houston. In addition to his consulting activities, he is a Lecturer in the Graduate Program in Petroleum Engineering at the University of Houston. He has worked for Shell Oil Company, Shell Development Company, Butler, Miller & Lents, and Scientific Software Corporation. Before opening his own office, he was Manager, Houston Operations, for

Gulf Universities Research Consortium. In that position, he was involved in contract research, principally on enhanced oil recovery. He has published technical papers on a variety of subjects, including water-flooding, enhanced oil recovery, volatile oil reservoirs, and partial water-drive gas reservoirs.

He received a B.S. degree in Geology from Rensselaer Polytechnic Institute and an M.S. degree in Petroleum and Natural Gas Engineering from Pennsylvania State University.

He is a member of the Houston Geological Society, the American Association of Petroleum Geologists, the Society of Independent Professional Earth Scientists, Society of Petroleum Evaluation Engineers, and the American Petroleum Institute. Long active in the Society of Petroleum Engineers, he has served as Chairman of the Gulf Coast Section and currently serves as Director-at-Large for the Society.

TURTLE BAYOU - 1936 TO 1983 - CASE HISTORY OF A MAJOR GAS FIELD IN SOUTH LOUISIANA

Turtle Bayou Field, a major, multi-reservoir gas field with a variety of producing mechanisms, is located in the middle Miocene trend in South Louisiana. Nearing the end of a productive life which spans over 30 years, the field was discovered by Shell Oil Company in 1949 after unsuccessful attempts by two other majors. It is a typical, low relief, moderately faulted Gulf Coast structure, probably associated with deep salt movement. The productive interval includes 22 separate gas bearing sands in a regressive sequence of sands and shales from approximately 6500 to 12,000 feet. Now estimated to have contained about 1.2 trillion SCF of gas in place, cumulative production through 1982 was 702 billion SCF. Cumulative condensate-gas ratio has been 20 barrels per million. Recovery mechanisms in individual reservoirs include strong bottom water drive, partial edgewater drive, and pressure depletion. Recovery efficiencies in major reservoirs range from 40 to 83 percent of original gas in place. On decline since 1973, it is anticipated the field will be essentially depleted in the next five years.

In this paper geological development is reviewed by reference to three papers published between 1955 and 1964. Reservoir performance is reviewed by comparing actual performance to that anticipated in a study prepared by the author during 1963, while employed by Shell. To the author's knowledge, a detailed case history of this type of field has never been published. It is hoped the work will be of use to those with interests in gas accumulations in comparable geologic settings.