

February 19, 1962

John M. Ware, Consultant, Oklahoma City

"Stratigraphic and Fractured Shelf Production - Kingfisher and Garfield Counties, Oklahoma"

February 26, 1962

Albert Carozzi, University of Illinois

"Contribution of Sedimentary Petrography to Historical Geology"

March 2, 1962

Alwyn Williams, Queen's University, Belfast, Northern Ireland

"Biometrics and Systematics" and "Quantitative Aspects of Evolution"

March 5, 1962

Carl C. Branson, Director of Oklahoma Geological Survey

#### Abstract

#### OKLAHOMA GEOLOGICAL SURVEY AND THE OIL AND GAS INDUSTRY

by

Carl C. Branson\*

In 1915 and 1917 the Survey published its Bulletin 19, a review of subsurface geology of the State. In 1930 this volume was superseded by Bulletin 40, a 3-volume work on oil and gas in Oklahoma. The influence of this huge undertaking can not now be assessed, but it must have been great.

Since 1935, when the Survey was reactivated, the ability of the Survey to help in the search for oil and gas has necessarily taken new directions. The industry now has more than two thousand geologists working in the State, the Survey has but seven. Survey work of aid to the industry must be in special areas of research and in mapping projects. Publications of the last twenty years include county reports accompanied by geologic maps on Cimarron, Washington, Tulsa, Ottawa, Muskogee, Haskell, Le Flore, Seminole, Creek, Okfuskee, Grady, McCurtain, Pawnee, Harper, and Hughes Counties. Mapping is completed on Craig, Mayes, Nobles, Rogers, Wagoner, Osage, Okmulgee, McIntosh, Lincoln, and Payne Counties. A report on Blaine County is in press. Many of these reports are accompanied by subsurface cross sections or by chapters on oil and gas geology.

Geologic reports and maps on smaller areas than counties cover much of the State. Such reports have been issued for northeastern Cherokee County, northeastern Osage County, and parts of Kiowa, Pushmataha, Beckham, Latimer, and Pittsburg Counties. Mapping is well along on Woods, Woodward, and Ellis Counties. All of these maps help in the search for oil and gas.

Dr. Louis Jordan's book on subsurface stratigraphic units is the best of its kind and is a required item in each oil geologist's office. The set of five index maps to geologic mapping (subsurface and surface) provides an easy and a rapid means of finding existing maps. Survey work, much of it done by Dr. Jordan, has been of assistance in development of subsurface LPG storage.

Oklahoma Geology Notes has carried many articles and maps of importance in the search for hydrocarbons. These have been written by Jordan, Chenoweth, Bado, Branan, Backo, Reeves, and others. A geologic map of pre-Pennsylvanian units, by Dr. Jordan, is in press. She has begun a similar map of units at the base of the Woodford. The basement-rock maps, one of southern Oklahoma, by Ham, Merritt, and Denison; the other, of northern Oklahoma, by Ham, Jordan, and Bellis, are well along. All of these contributions are of

direct and indirect importance to oil finders.

When you consider that the Survey each year also answers thousands of inquiries, examines hundreds of submitted samples, investigates gypsum, limestone, asphaltite, borates, rock salt, glass sand, clays, igneous rocks and fossils, the total bulks large and the part played in oil and gas search is amazing. The State has a tremendous bargain from its small annual investment in Oklahoma Geological Survey.

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Recent Available Survey Publications Useful to Oil Finders:

Geologic Map of Oklahoma, by H. D. Miser. 1954. Scale 1/500,000. Price \$2.50

Index Maps. Index to geologic mapping in Oklahoma, 1901-1960, by Carl C. Branson and Louise Jordan, November 16, 1961. \$2.00 per set of 5 maps.

Map GM-3. Tectonic Map of Oklahoma, by J. Kaspar Arbenz. November 19, 1956. Scale 1 to 750,000. \$0.50 folded, \$0.65 rolled in tube.

Guide Book VI. Subsurface stratigraphic names of Oklahoma, by Louise Jordan. Dec. 31, 1957. 220 pages, 212 figures. \$3.00.

Guide Book VIII. The composite interpretive method of logging drill cuttings, by John C. Maher. 48 pages, 14 figures, 6 tables, colored plate. June 18, 1959. \$1.50.

Oklahoma Geology Notes. Printed in 12 numbers annually. Continues The Hopper. Now in the twenty-second volume. Contains mineral statistics, bibliographic data, original articles. Subscription \$2.00 per year, 25 cents a single number.

Directory of Oklahoma Geologists and Geophysicists. 116 pages. November 17, 1960. \$1.00.

Circular 50. Geology of northern Latimer County, Oklahoma, by D. T. Russell. 57 pages, 12 figures, colored geologic map. January 25, 1960. Cloth bound \$2.50, paper \$2.00. Map alone \$1.00.

Circular 51. Geology of the Cavanal syncline, Le Flore County, Oklahoma, by P. K. Webb. 65 pages, 1 figure, colored geologic map. May 2, 1960. Cloth bound \$1.75, paper \$1.25. Map alone \$1.00.

Circular 53. Geology of the Featherston area, Pittsburg County, Oklahoma, by R. E. Vanderpool. 36 pages, 10 figures, colored geologic map. May 2, 1960. Cloth bound \$1.75, paper \$1.25. Map alone \$1.00.

Circular 58. Correlation of Paleozoic rocks from Coal County, Oklahoma, to Sebastian County, Arkansas, by Sherwood E. Frezon. 54 pages, 3 figures, 2 plates. January 1962. Cloth bound \$2.00, paper \$1.25.

Bulletin 89. Geology and mineral resources of Blaine County, Oklahoma, Part I. Stratigraphic and general geology of Blaine County, Oklahoma, by R. O. Fay; Part II, Economic geology and petrology of gypsum and anhydrite in County, by W. E. Ham; Petroleum geology of Blaine County, by John T. Bado and Louise Jordan. Map 1962.

Bulletin 95. Basement rocks of southern Oklahoma, by W. E. Ham, R. E. Denison, and C. A. Merritt. In preparation. Available 1962.