It is evident that the Silurian and Ordovician formations which crop out in the Arbuckle and Wichita Mountains of Oklahoma exist underground in parts of north-central and west Texas, and that they were originally continuous with the rocks of the same age which are now exposed in the Marathon uplift.

Tulsa, Oklahoma
April 1, 1930

B. H. Harlton

SILURIAN AT BIG LAKE

E. O. Ulrich has maintained that the Richmond stage of the Cincinnatian is more properly a part of the Silurian than of the Ordovician. This classification is contrary to that of most other stratigraphers, but it seems to be the most natural classification to follow at Big Lake, Reagan County, Texas. In that field an apparently conformable series of Richmond-Alexandrian-Niagaran strata is separated by angular unconformities from the Pennsylvanian above and the Ordovician below.

The following table gives a classification and description of the Silurian formations at Big Lake. The thickness and character of the formations are described as they are found in the Big Lake Oil Company's University No. 3-C, and the depths at which they occur are appended for reference.

The Henryhouse and Chimneyhill limestones represent the Silurian part of the Hunton terrane of Oklahoma. The upper three (Devonian) formations have not yet been recognized at Big Lake. It is worthy of note that next to the Ordovician the Hunton is the largest pre-Pennsylvanian producing horizon in central Oklahoma. One well at Big Lake (the Big Lake Oil Company's University No. 2-C) is a commercial producer from the basal part of the Hunton; its production has increased from 575 to 650 barrels a day.

The thickness of the Silurian strata increases away from the top of the structure. In the discovery well, the Texon Oil and Land Company's University No. 1-B, only 10 feet of the basal Hunton limestone and 20 feet of upper Sylvan shale are present above the Ordovician (Chazy Simpson); whereas in the Big Lake Oil Company's University No. 1-C, which is 43 feet lower structurally on the top of the Sylvan than the discovery well, there is 10 feet of basal Hunton and 41 feet of Sylvan. There is 60 feet of strata of doubtful Ordovician age in this well, wedged between the Sylvan and strata identical with the

*Published by permission of the Mid-Continent Petroleum Corporation.*