
NOTES ON THE LAVERNE FORMATION¹

STUART L. SCHOFF, U. S. Geological Survey, Norman

ABSTRACT

The Laverne formation occurs in scattered outcrops in Harper, Beaver, Texas, and (probably) Ellis Counties, Oklahoma, and in Meade and Seward Counties, Kansas. It is distinguished by soft, massive white chalk, hard fossiliferous gray to white limestone, hard carbonaceous limestone, and coaly shale. Sands, gravels, and shales less easily distinguished from other Tertiary formations are also included. Among the fossils are diatoms, ostracods, turtles, fish, horses, camels, beaver, plants, and trees. These collectively, and with respect for stratigraphic position, indicate lower Pliocene age, and the lower part of the formation perhaps is upper Miocene. In nearly all exposures there is appreciable dip, the maximum being about 40 degrees. The formation may be partly fluvial and partly lacustrine, the chalks and limestones having been deposited in a lake or series of lakes, perhaps ox-bow lakes along a major valley.

¹Published by permission of the Director, Geological Survey, U. S. Department of the Interior, and the Director, Oklahoma Geological Survey.