

A PROBABLE ORIGIN OF THE NUMEROUS DEPRESSIONS IN THE  
 MESA SOUTH OF THE ARROYO FORMED BY THE OUTLET  
 OF TIJERAS CANYON IN THE SANDIAS NEAR  
 ALBUQUERQUE, NEW MEXICO.

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The occurrence of numerous slight depressions, thickly distributed over the mesa south of Tijeras arroyo on the east side of the Rio Grande, south of Albuquerque, New Mexico, is very noticeable. These were observed to be rarely more than five yards across and commonly from eighteen inches to two feet in depth and are provided with a raised border. They resemble buffalo wallows very much; but are too abundant and their distribution is too general. The stratum in which they are indented is a very loose, unlithified formation, superimposed upon the Albuquerque Marl,\* a calcareous deposit some six feet in thickness.

The depressions extend in depth to this marl stratum and seem to hold water.

These depressions seem to be the "blowouts" of mud upheavels. They seem to have been formed at the time the Albuquerque marl was in a semi-fluid state. The loose unlithified stratum that is superimposed upon the marl was washed down from the Sandias onto the area faster than the marl could harden or "ereep" from its advance over the bottom of the then Albuquerque lake which occupied the Rio Grande embayment at that point. As a result of the pressure caused by the superincumbent weight, mud lumps formed in size proportionate to the pressure, like those now forming in the Mississippi Delta.\*\* And like those of the Southeast Pass of that delta, they collapsed on reaching the mature stage, leaving a small pit surrounded by a raised ring. Thus the mud lump, "blowout" theory seems to explain the origin of the depressions.

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\*C. L. Herrick. *The Geology of the Environs of Albuquerque, New Mexico*. American Geologist, Vol. XXII, pp. 29-33.

\*\*E. W. Hilgard. *The Exceptional Nature and Genesis of the Mississippi Delta*. Science, Vol. xxiv, pp. 861-866.

