

BOGRAD

MISSISSIPPI
STATE GEOLOGICAL SURVEY

CIRCULAR 2

WATER

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Mississippi State Geological Survey

Water

Running clear water during times of drought, especially after three years of practically no summer rainfall, is always a beautiful and pleasant sight. Motorists traveling Highway 7 between Oxford and Holly Springs behold such stretches at several places. In fact it is a common and expected sight--but how about the flow after three successive dry seasons, when stock watering pool after stock watering pool has dried up all over this northern section of Mississippi?

To determine the question of flow, the State Geologist and his associates, spent the day, Saturday, September 18, covering the region in a pick-up truck. As usual water was present in Hurricane Creek just north of Oxford; it was present in Little Springs Creek at Malone, in the same creek at Waterford; along Coldwater River from Highway 7 near Holly Springs to U. S. Highway 78 west of Byhalia; along Chewalla Creek east of Holly Springs. In fact it is remarkable the amount of water in these creeks and rivers during the present prolonged drought.

In order to get a fuller picture, the State Geological Survey pilot, Jimmy Faulkner, and the State Geologist flew the length or the upper stretches of these streams. The amount of flow along Little Spring Creek, the amount along the 10-mile to 15-mile stretch of the Coldwater River, and the amount flowing down Chewalla Creek was remarkable.

But after the car trip and before the helicopter flights, the State Geologist, from topographic maps, computed the elevation of this water or the elevation of its emergence from the ground--and again was astonished

at the same approximate elevations at these different places--at Hurricane 340 feet; at Malone 290 feet; at Waterford 340 feet; at Spring Lake State Park 360 feet; along the Coldwater 420 feet; near St. Marks Church along Big Spring Creek 380 feet.

Accordingly an emergence at something like 340, 360, or 380 feet above sea level is indicated. Likewise, too, beneath a thick sand an impervious layer is indicated at something like these elevations. To help determine this fact, Assistant State Geologist, Tracy Lusk, is drilling a series of test wells and is determining the kind of beds by use of a Widco electric logger. At the indicated elevations he finds a coarse water sand. At approximately the same elevation, Mr. Hans Wittjen at Hudsonville is pumping water from 27-foot depths in three small wells through a single hook-up (in series), for irrigation purposes.

At this stage of the investigation Supt. Crocket and Agronomist Arnold of the Experiment Station, reported water in Pigeon Roost Creek west of Holly Springs--a stream somewhat off the beaten path. It, too, proved to have clear running water. South of the streams about 1 1/4 miles, Mr. W. G. Matthews, a farmer and store keeper, advised that the water in his well comes from a depth of about 33 feet, which indicates the same general aquifer and underlying impervious layer.

In summing up this preliminary report, then, it may be stated that along the lower topographic stretches in this general area, a rather abundant supply of good ground water is indicated. In such places it should be reached in shallow wells 60, 80, or 100 feet in depth; in higher lands, at greater depths, of course. It should

be ample for such domestic purposes as well water and stock pond water--the crying need. At places, too, it should supply irrigation needs, as it does north of Victoria.

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