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FOR FURTHER INFORMATION,
PLEASE CONTACT:

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***OWRB Asks for Public's Assistance
In Locating Artesian Wells Near Sulphur***

As part of its ongoing hydrology study of the Arbuckle-Simpson aquifer in south central Oklahoma, the Oklahoma Water Resources Board is soliciting information from local citizens on flowing artesian wells in the Sulphur area.

"Much of the accuracy and success of this study will be determined by the help and cooperation of local landowners and other citizens who utilize and depend upon the Arbuckle-Simpson aquifer", says Mike Mathis, chief of the OWRB's Planning and Management Division. "We are relying upon their assistance in identifying the location of artesian wells throughout this area, which will allow our hydrologists and geologists to establish historic trends in groundwater flow, availability, and usage."

An artesian well is one that has been drilled into a pressurized aquifer, such as the Arbuckle-Simpson, where the underground pressure is great enough for the water to rise inside the well and, in some cases, discharge to the surface without a pump. The amount of water that flows from artesian wells is a direct function of pressure within the aquifer.

The first flowing well drilled in the Sulphur area was the Bridgeman Well, drilled in 1889, but proliferation of flowing wells did not occur until the 1920s and 1930s. According to the U.S. Geological Survey, the total flow from artesian wells in 1987 was only about 10 percent of that reported in 1939. The Vendome Well—one of the most significant landmarks in the Chickasaw National Recreation Area, originally drilled in 1922—once flowed at an estimated 2,500 to 3,500 gallons per minute. Today, however, it yields only about 400 to 500 gallons per minute, according to Sue Braumiller, a hydrologist with the National Park Service.

"Although it has become evident that artesian flow in the aquifer has decreased drastically over time, we know that many artesian wells still exist and are utilized in this area. Because a number of these wells were drilled a generation ago, records have been lost and their locations remain a relative mystery," says Noel Osborn, a hydrogeologist with the OWRB.

"Once we find these sites and determine the flows, we can compare current to historic flow rates, which in turn will provide a better understanding of the dynamics of the aquifer flow system in a historically important region of the Arbuckle-Simpson aquifer," Osborn adds.

Specifically, OWRB researchers are seeking the following information on existing artesian wells:

- location
- date the well was drilled
- flow of the well or approximate date that flow ceased; and
- owner contact information

The OWRB is in the second year of its comprehensive multi-year study of Arbuckle-Simpson aquifer. The aquifer supplies flow to many springs and streams, including those at the Chickasaw National Recreation Area, but more information is required to properly manage and protect the region's water resources. The investigation will be the most intensive analysis of surface and groundwater relationships ever conducted in Oklahoma. OWRB staff will frequent the Arbuckle-Simpson area throughout the summer to inventory wells and collect other supporting data for the study.

To contribute information on the location of artesian wells in the Sulphur vicinity, call Brent Wilson or Noel Osborn at 405-530-8800.

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