Section Description

G2-G2' is a strike-oriented section that traverses the upper part of the Coastal Plain. Originating at a core hole in eastern Georgia, the section runs in a northeasterly direction passing through Barnwell, Orangeburg, Calhoun, Richland, Sumter, Lee, and Darlington Counties, terminating at a water well in the eastern part of Dillon County near the SC-NC border. Seven core holes and four water wells were used to construct the section. One inch on the vertical scale is equivalent to 200 feet of depth. The distance, in miles, between two adjacent wells is provided on the section.

Moving from west to east along the section line, the first well on the section is the **Millers Pond** well-cluster site located in northeastern Burke County, Georgia. Drilled during 1991-92 by the U.S. Geological Survey (USGS), the site was constructed to characterize the geologic, hydrologic, and water-quality characteristics of the aquifers and confining units of the area (USGS GGS-IC-96). A core was drilled to bedrock and seven monitoring wells were constructed at the site.

Crossing into South Carolina, well **BRN-303** is a core hole drilled at the Savannah River Site (SRS) by the Westinghouse Savannah River Company in 1985 (SCDNR Report 5). The core is located at the P-19 well-cluster site in northern Barnwell County and is one of eighteen P-well sites that were drilled at SRS in the 1980s (SRS DPST-88-627). Each P-well site has a continuous core drilled either to bedrock or to the Cape Fear Formation, geophysical logs, and as many as nine monitoring wells. Information from the cores and logs was used to delineate and map the hydrogeologic units at SRS, and wells were constructed in each major aquifer to determine vertical hydraulic gradients and to establish a permanent observational well network inside SRS. In addition to the core and geophysical logs, there are nine monitoring wells at the P-19 site.

Continuing along the section line, the next well (**BRN-358**) is one of eight well-cluster sites drilled by the South Carolina Water Resources Commission (SCWRC) in the late 1980s and early 1990s. Funded by the U.S. Department of Energy, each C-well site has a continuous core drilled to bedrock, geophysical logs, and up to 10 monitoring wells. Information from the cores and logs was used to delineate and map the hydrogeologic units outside of SRS, and wells were constructed in each major aquifer to determine vertical hydraulic gradients and to establish a permanent observational well network around the outside perimeter of SRS (SCDNR Open-File Report 1). **BRN-358** is a core hole at the C-5 well-cluster site in northern Barnwell County. Upon reaching bedrock, the core hole was backfilled and completed as a monitoring well in the McQueen Branch aquifer. In addition to this well, there are six other wells at the site, all of which are monitored by the South Carolina Department of Natural Resources (SCDNR) for water levels.

Well **BRN-240** is a core hole drilled by the USGS in 1983 near the Town of Salley in northeastern Barnwell County to provide stratigraphic information of the area. Well **ORG-256** is a core hole drilled by the USGS in 1982 to obtain stratigraphic information. Located near the Town of Wolfton in northern Orangeburg County, the core hole was backfilled and completed as a well in the Crouch Branch aquifer but has since (2012) been plugged and abandoned by the current property owner. Well **CAL-129** is a public supply well drilled in 1992 for the Upper Calhoun Rural Water District. Completed in the Crouch Branch aquifer, an aquifer test produced a transmissivity of 5,300 ft^2/d (feet squared per day) pumping at a rate of 257 gpm (gallons per minute).

Continuing to the northeast, well **RIC-543** is a core hole drilled by the USGS and SCDNR in 1995 at Webber Elementary School in Eastover. Upon reaching bedrock, the borehole was backfilled and completed as a

monitoring well in the McQueen Branch aquifer. This well is currently monitored by SCDNR for water levels. Well **SUM-340** is a core hole drilled to bedrock by the USGS and SCDNR in 1998 at the Sumter Municipal Airport northeast of the City of Sumter. No well was completed at the site. In 2016, SCDNR drilled five monitoring wells at the Central Carolina Technical College, Natural Resources Management Center in Sumter, which is located within ½ mile of the core hole. All the wells at the site are currently being monitored by SCDNR for water levels.

Well **LEE-72** is a public supply well drilled in 1991 in the eastern part of Lee County for the Cassatt Water Company. Completed in the McQueen Branch aquifer, an aquifer test yielded a transmissivity of 3,200 ft^2/d while pumping at a rate of 403 gpm. Well **DAR-90** is an industrial well drilled for Fiber Industries in 1973. The well is completed in both the McQueen Branch aquifer and in sandy beds of the Gramling confining unit. The last well on the section is **DIL-114**, which is an abandoned test hole drilled in 1994 for Trico Water Company in northern Dillon County.

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