

## Section Description

B-B' is a dip-oriented section running along the western side of the State. Originating at a water well in Aiken County, the section runs in a southeasterly direction passing through Barnwell, Bamberg, and Colleton Counties, terminating at a core hole at Edisto Beach in southern Colleton County. Five core holes and eight 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.

Starting updip, the first well on the section (**AIK-445**) is a public supply well drilled for the Town of New Holland in 1972. Screened in the McQueen Branch aquifer, the well is located about 15 miles from the Fall Line in the northeastern part of Aiken County. Continuing downdip, the section passes through core hole **AIK-826** at the C-3 well-cluster site, which was drilled in 1988 at Aiken State Park ([SCWRC Open-File Report 28](#)). The C-well cluster sites were funded by the U.S. Department of Energy and constructed by the South Carolina Water Resources Commission (SCWRC) in the late 1980s and early 1990s along the outside perimeter of the Savannah River Site (SRS) in South Carolina. Each of the eight C-well sites 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 of the area, and wells were constructed in each major aquifer to determine vertical hydraulic gradients and to establish a permanent observational well network around SRS ([SCDNR Open-File Report 1](#)). Six monitoring wells were drilled at the C-3 site, all of which are monitored by SCDNR for water level fluctuations.

The next well on the section, **BRN-921**, was a test hole drilled in 1999 for the Town of Williston in northern Barnwell County. Upon obtaining geophysical logs of the borehole, the hole was plugged and abandoned. A second hole was drilled adjacent to the abandoned hole and completed as a public supply well (BRN-932) in the Crouch Branch and McQueen Branch aquifers. An aquifer test made at that well yielded a transmissivity of 11,000 ft<sup>2</sup>/d (feet squared per day) pumping at a rate of 1,346 gpm (gallons per minute).

Drilled in 1988, **BRN-358** is a core hole at the C-5 well-cluster site in northern Barnwell County ([SCWRC Open-File Report 28](#)). One of eight C-well sites drilled by the SCWRC, seven wells were constructed at the site, all of which are monitored by SCDNR for water levels. The next well on the section, **BRN-386**, is a crop irrigation well drilled in 1991 in central Barnwell County and completed in the Crouch Branch aquifer. Continuing downdip, **BRN-349** is a core hole drilled in 1987 at the C-6 well-cluster site in southern Barnwell County ([SCWRC Open-File Report 23](#)). In addition to the core, eight wells were constructed at the site, all of which are monitored by SCDNR for water levels.

The next well, **BRN-295**, is a monitoring well drilled by SCWRC in 1984 in the southernmost part of Barnwell County. Drill cuttings and geophysical logs were obtained from the hole and a monitoring well was completed in the Middle Floridan aquifer. An aquifer test of the well yielded a transmissivity of 6,300 ft<sup>2</sup>/d pumping at a rate of 80 gpm. Water level measurements are periodically taken from the well by SCDNR hydrologists for the purpose of constructing potentiometric maps of the aquifer.

Well **BAM-68** is a core hole drilled by the U.S. Geological Survey (USGS) in 1986 at Rivers Bridge State Park for stratigraphic and hydrologic information. A monitoring well was completed in the Gordon aquifer that is used by SCDNR in the development of potentiometric maps of the aquifer. Well **COL-241** is an abandoned test hole drilled in 1984 in northern Colleton County as an exploratory oil and gas hole. **COL-348** is an abandoned test hole drilled in 1991 by the U.S. Army Corps of Engineers near the City of Walterboro for the purpose of conducting a seismology study. **COL-336** was drilled for domestic use in 1990 but was soon abandoned due to the occurrence of brackish water. **COL-374** is a public supply well

drilled in 2001 at SCDNR-owned property at Bennett's Point. The last well on the section, **COL-364**, is a core hole drilled in 1999 by the USGS and SCDNR at Edisto Beach for stratigraphic information. Upon reaching the desired depth and obtaining geophysical logs, the test hole was plugged and abandoned. No well was completed at the site.

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