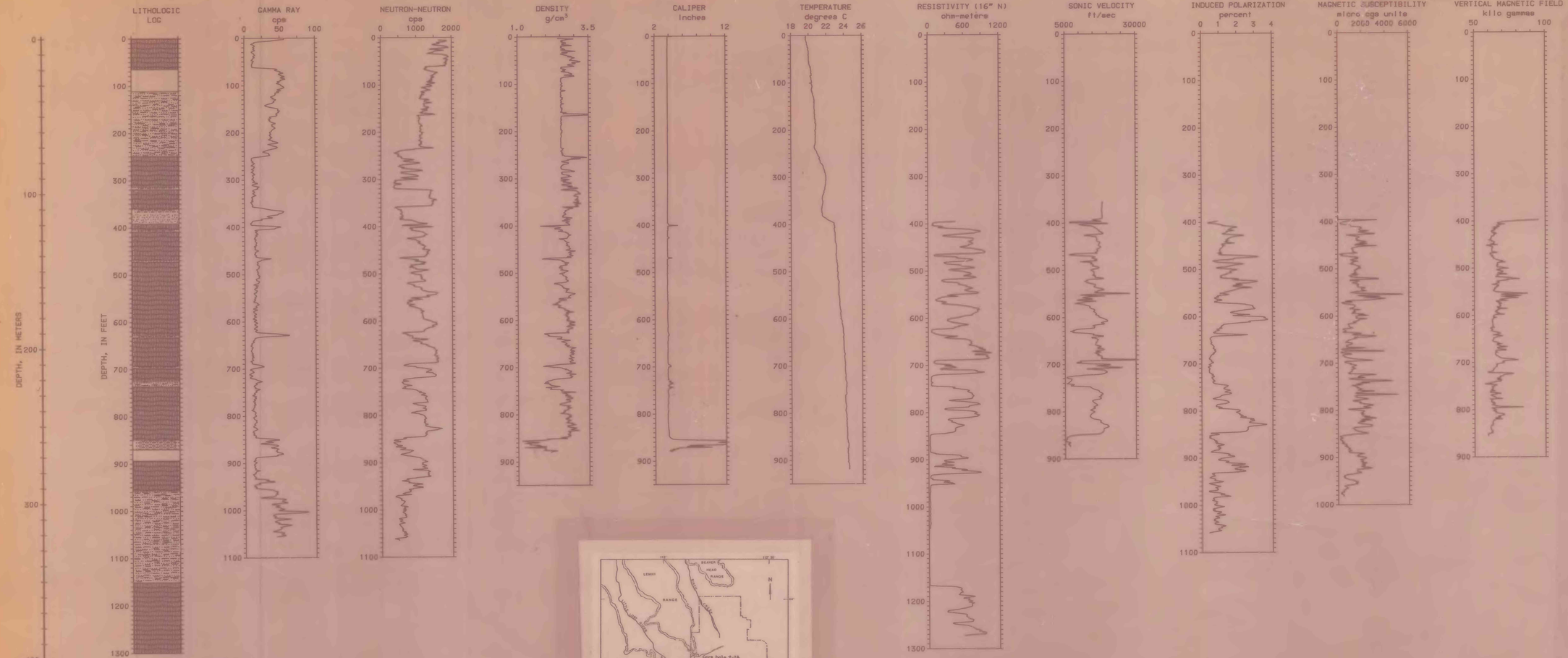
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT
79-1460



Discussion

The U.S. Geological Survey made geophysical well-logging measurements in exploration well 2-2A on August 31 and September 1, 1978 in order to provide in-situ physical-property information on various types of rock interspersed by the upper portion of the well. Exploration well 2-2A and two other core holes, also located on the eastern Snake River Plain, Idaho, were drilled by the U.S. Department of Energy in cooperation with the U.S. Geological Survey to obtain subsurface geologic information for geothermal exploration of three geologic environments in the area (Embree and others, 1979; and Doherty, 1979a).

Geology, lithology, and stratigraphy of rock penetrated by well 2-2a are discussed in detail by Doherty (1979b). In general, the sequence of rocks penetrated by the upper part of the well where the geophysical logs were obtained is dominated by a number of thick basaltic flows interbedded with thin layers of sand and silty clay along with a few thick layers of interbedded silty clay and sand. The lithologic log presented in this report is taken from Doherty (1979b). The well logs were made with U.S. Geological Survey well-logging system fl mounted with a computer-based digital data acquisition system. The system includes a capability for making standard logs including gamma ray, neutron, density, caliper, temperature, electrical resistivity, sonic velocity, and unstandard logs including induced polarization, magnetic susceptibility, and vertical magnetic field intensity. Detailed information on the interpretation of standard logs has been reported by Keys and MacCary (1971), Hilchie (1978), and Pirson (1963). Nonstandard logs have been discussed by Brodtkin and others (1952), Dakhnov (1962), Dakhnov and others (1967), Dyck and others (1975), Scott and Daniels (1976), Scott and Tibbetts (1978), and Zablocki (1966 and 1974).

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GEOPHYSICAL WELL-LOGGING DATA FROM EXPLORATION WELL 2-2A, NW 1/4 SEC. 15 T.5N., R.31E., IDAHO NATIONAL ENGINEERING LABORATORY, BUTTE COUNTY, IDAHO

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