



- EXPLANATION**
- Well used for determining thickness of saturated Quaternary deposits
  - 500 — Line of approximate equal saturated thickness, Quaternary deposits. Interval 100 feet
  - - - - - Approximate eastern limit of saturated Quaternary deposits
  - — — — — Approximate eastern limit of principal aquifer

**DISCUSSION**

Saturated Quaternary deposits in the Sugar House quadrangle supply significant quantities of water to wells from which water is withdrawn for domestic, municipal, industrial, and irrigation uses. The deposits consist of clay, silt, sand, and gravel; individual beds range from a few inches to several tens of feet thick. The principal aquifer, which is almost completely within the Quaternary deposits, supplies about 4 percent, or 9,000 acre-feet, of the municipal and industrial water used annually in Salt Lake County during 1964-68.

As a general rule, more water is stored and more water will be yielded to a well where aquifers are thicker. This map can be used as a general guide to those areas where greatest amounts of water are stored in the aquifer, and where yields to wells may be greater. Local variations in the ability of saturated deposits to transmit water can alter the general relationship between aquifer thickness and yield of wells.

The thickness of saturated Quaternary deposits within the area of the Sugar House quadrangle ranges from zero to about 650 feet, as shown on the map. The thickest section of these deposits is near the southwestern corner of the quadrangle, and the thinnest section is along the mountain front adjacent to the approximate eastern limit of saturated Quaternary deposits.

The thickness of saturated Quaternary deposits shown on this map is based on drillers' logs for 55 deep wells (which show the thickness of the Quaternary deposits) and on water-level measurements made in February 1972 in wells in unconfined shallow aquifers.

Reports in the following list of selected references contain other information about the saturated Quaternary deposits in this and adjacent parts of Jordan Valley, Utah. The basic-data reports and releases contain well logs, water-level measurements, and other types of basic groundwater data. The interpretive reports contain discussions of the occurrence of ground water, tests to determine hydraulic properties of the aquifer, and related information. Ground-water terms used in this report have been defined by Lohman and others (1972).

**SELECTED REFERENCES**

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———, 1972b, Map showing relative ages of faults in the Sugar House quadrangle, Salt Lake County, Utah: U.S. Geol. Survey Misc. Geol. Inv. Map I-766-B.

Base from U.S. Geological Survey, 1963  
Photorevision as of 1969  
10,000-foot grid based on Utah coordinate system, central zone  
1,000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET  
DOTTED LINES REPRESENT 10-FOOT CONTOURS  
DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

Interior—Geological Survey, Washington, D. C.—1973—W73206

**MAP SHOWING THICKNESS OF SATURATED QUATERNARY DEPOSITS, SUGAR HOUSE QUADRANGLE, SALT LAKE COUNTY, UTAH, FEBRUARY 1972**

By  
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1973