U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
U.S. ARMY-ROCKY MOUNTAIN ARSENAL, U.S. DEPARTMENT OF ENERGY-ROCKY FLATS FIELD OFFICE, COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, COLORADO DEPARTMENT OF NATURAL RESOURCES-STATE ENGINEERS OFFICE, DENVER WATER DEPARTMENT, LITTLETON-ENGLEWOOD WASTEWATER TREATMENT PLANT, EAST CHERRY CREEK VALLEY WATER AND SANITATION DISTRICT, METRO WASTEWATER RECLAMATION DISTRICT, WILLOWS WATER DISTRICT, AND CITIES OF AURORA, LAKEWOOD, AND THORNTON

HYDROLOGIC INVESTIGATIONS ATLAS HA–736
Depth to the water table—SHEET 5 of 5
Robson, S.G., 1996, Geohydrology of the shallow aquifers in the Denver metropolitan area, Colorado

Depth to the Water Table

The map of the depth to the water table (fig. 7) was calculated as the difference between the land-surface and water-table altitudes. Digital coverages of the land surface and the water table were subtracted using the geographic information system, and the resulting coverage of the depth to the water table was plotted only for the area having a well-defined (20-foot contour interval) water-table altitude. Beyond this area, the aquifers may be thin, discontinuous, or transient, and the water table may be in the bedrock during much of the year. If shallow aquifers are present in this area, the water table generally will be near the top of the bedrock, and the depth to water will be similar to the thickness of the unconsolidated sediments (fig. 2).

The depth to water ranges from 0 to 20 feet in the central parts of the larger valleys and ranges from 20 to 40 feet along the margins of the valleys. The water table is near land surface along the perennial streams such as Bear Creek, Clear Creek, Cherry Creek, and the South Platte River.

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
foot	0.3048	meter
mile	1.609	kilometer
square mile	2.59	square kilometer

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level."

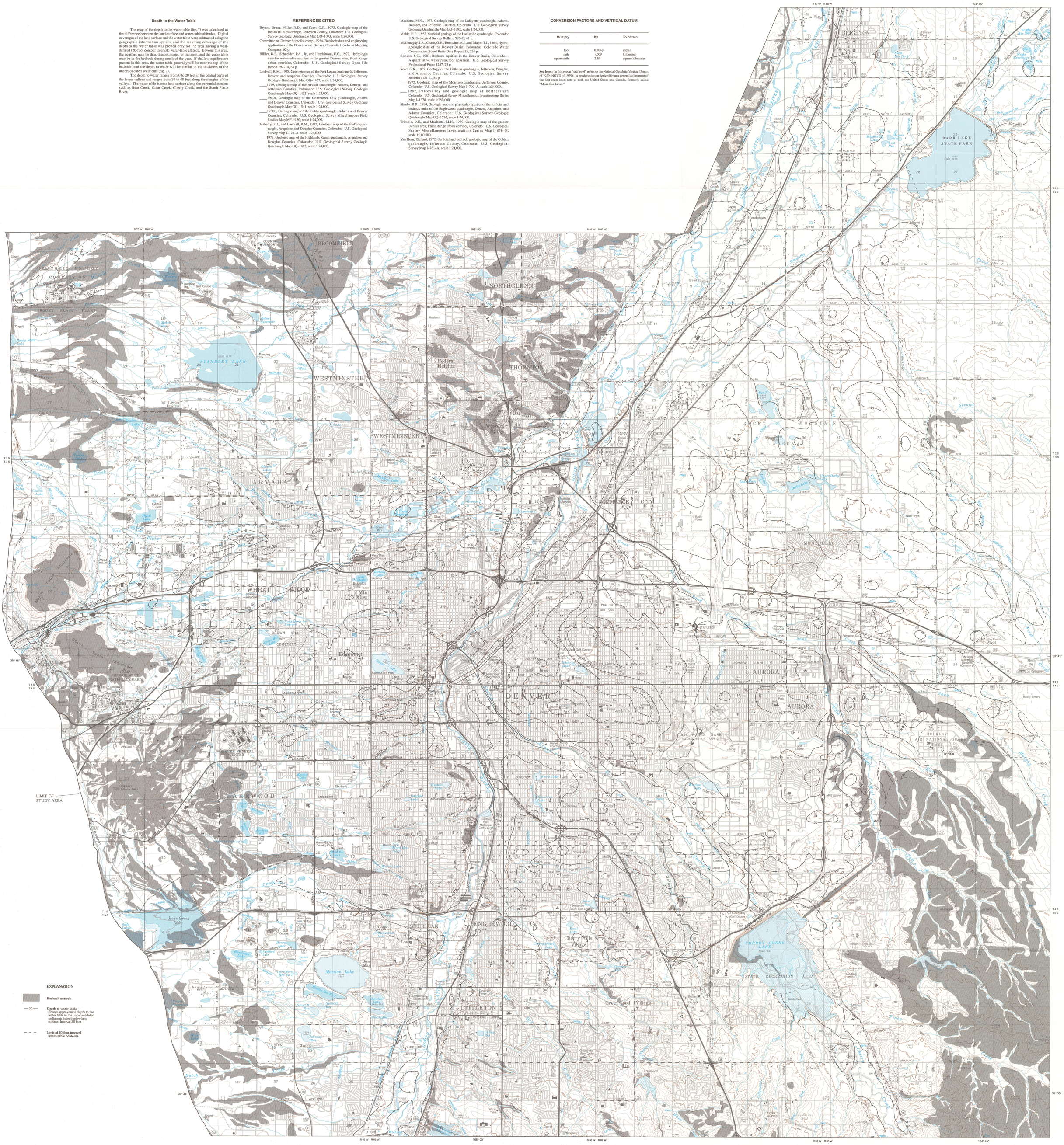

FIGURE 7 — Depth to the water table in the shallow aquifers

EXPLANATION

- Bedrock outcrop
- —20— Depth to water table—Shows approximate depth to the water table in the unconsolidated sediments in feet below land surface. Interval 20 feet.
- – – – Limit of 20-foot-interval water-table contours

Base from U.S. Geological Survey 1:50,000 County Maps for Adams, Arapahoe, Denver and Jefferson Counties

SCALE 1:50,000

1 1/2 0 1 2 3 4 MILES

1 1/2 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 20 AND 80 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1996

GEOHYDROLOGY OF THE SHALLOW AQUIFERS IN THE DENVER METROPOLITAN AREA, COLORADO

By
S.G. Robson

1996