

INTRODUCTION

This map provides information on the location and distribution of three general types of geologic materials in part of Salt Lake County, including the southeastern part of Salt Lake County. These materials have different physical properties that are pertinent to comprehensive planning and zoning, land-use planning, engineering usage. The map should be of use in preliminary studies to determine the distribution of general foundation material and to determine the potential for seepage of the ground surface during major earthquakes, which could result in damage to waterlines, gaslines, large buildings and other major engineering structures.

The map is based on data collected from 1950 to 1960. Lines showing the depth of loosely packed sediments are based on drillers' logs of water wells in and near the 35-square-mile part of the quadrangle of the mountains—less than one data point for each square mile. Lines showing the depth to bedrock are based on individual geophysical data, and the data points are more widely scattered.

oulders to clay-size grains that are moderately well to tightly packed. The grains are rounded to subangular, loosely packed sediment that the grains have been packed closer together—probably owing to the weight of overlying material, to the action of ground water, and to shaking by ancient earthquakes. Conglomerates also are present in these sediments. These deposits are denser, harder, and firmer than the overlying loosely packed sediments. The tightly packed sediments are of Tertiary age.

The bedrock beneath the sediments consists in part of limestone, dolomite, shale, sandstone, or quartzite, similar to the rocks exposed in the Wasatch Range in the eastern part of the quadrangle, which are of pre-Tertiary age. The bedrock may also include some volcanic lava flows, limestone, siltstone, and conglomerate of older Tertiary age in the western part of the quadrangle. These rocks are cemented, but they are not as hard

HOW TO READ THIS MAP

Three sets of lines on the map show (1) the shape of the ground surface (brown lines), (2) the thickness of loosely packed sediments (thin black lines), and (3) the depth to bedrock (heavy black lines), which is also the thickness of the combined loosely and tightly packed sediments. The brown lines are drawn at 100-foot intervals. The sediments beneath a given place on the map, subtract the thickness of the tightly packed sediments from the thickness of the sediments at that location. The tightly packed sediments are everywhere beneath the loosely packed sediments.

On the map, the thickness of the loosely packed sediments is drawn at intervals of 100 and 200 feet (35 and 61 meters). The zero-thickness line is at the contact between exposed bedrock and the sediments. The thickness of the tightly packed sediments shows the thicknesses in inches of 100 and 200 feet.

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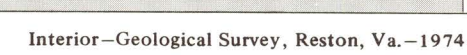
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