



EXPLANATION

SALINE DEPOSITS

Carbonate zone
Brine salinities 0.5 to 6.0 percent

Sulfate zone
Brine salinities 3 to 6 percent

Carbonate and sulfate zone undifferentiated
Brine salinities 3 to 6 percent

Chloride zone
Brine salinities 6 to 33 percent

Qcsi
Silt facies

Silty playa beds impregnated with younger carbonate salts and capped by crust of rock salt in blister forms 1 to 3 inches thick. Sulfates occur as nodules 1/16 to 1/8 inch in diameter in layer 1/2 inch thick about 3 inches below surface. Ground generally damp and frequently wet, partly by flooding by surface water but mostly by ground water. Vegetation pickleweed

Qcs
Sand facies

Younger carbonate salts impregnating sandy playa deposits commonly with a caliche-like layer of sulfate salts 1 to 3 inches thick 3 to 6 inches below the surface. Ground elevated, subject only to flooding by runoff originating on this surface. Vegetation includes several species of phreatophytes

Qsg
Massive gypsum

Two to 6 feet thick, capped by anhydrite and (or) baronite 3 to 8 inches thick. Thin veins of rock salt. At surface is light-brown silty layer 1 to 2 inches thick containing various salts and clastic minerals, probably coltan. Deposits underlain by damp or wet silt. Elevated and protected against flooding. Vegetation lacking

Qsm
Qcm
Marsh deposits

Qsm, mostly sulfate salts, some rock salt. Qcm, marshes containing sodium carbonate and other carbonate salts; restricted to east side of Cottonball Basin. Ground generally wet. Vegetation chiefly thallophytes, some pickleweed locally; saltgrass and rush in carbonate marshes

Qcsh
Saline facies of carbonate and sulfate zones

Surface layer is brown silt 6 to 18 inches thick containing sulfate salts. Underlain by irregular, slabby rock salt 1 to 3 feet thick. At base is silt. Low parts subject to flooding by rise of water table during protracted wet periods; runoff is by solution pits. Vegetation sparse pickleweed

Qhs
Silty rock salt, smooth facies

Surface layer is brown silt 2 to 18 inches thick containing sulfate and borate salts; thin panward. Underlain by smooth layer of rock salt 2 to 18 inches thick that thickens panward. At base is silt. Subject to some flooding by runoff originating on this surface. Total dissolved solids in ground water mostly in range 3 to 15 percent. Vegetation lacking

Qhr
Silty rock salt, rough facies

Two to 5 feet thick; capped by brown silty layer 1 to 2 inches thick containing sulfate salts. Surface rough. Elevated and protected against flooding. Total dissolved solids in ground water mostly in range 12 to 25 percent. Vegetation lacking

Qh
Massive rock salt

Four to 6 feet thick. Other salts and silts lacking. Surface rough. Elevated and protected against flooding. Ground water nearly saturated. Vegetation lacking

NONSALINE DEPOSITS

Qd
Dune sand

In active dunes. Contains artifacts representing the bow and arrow and pottery occupations. Surface rarely flooded; ground water shallow and generally less than 0.5 percent total dissolved solids. Vegetation mesquite

Qf
Flood plains

Sand and silt, in part pedimented surfaces of older deposits. Extensive salt efflorescence and thin salt crusts. Seasonally flooded. Vegetation lacking except along washes crossing the carbonate zone

Qg
Gravel

On fans at foot of mountains

Contact

Dashed where approximately located

Normal high-angle fault
Dashed where approximately located; dotted where concealed

Strike and dip of beds

Surface mine working or quarry



Base from U.S. Geological Survey topographic quadrangles
INTERIOR—GEOLOGICAL SURVEY WASHINGTON, D. C. 1965—G64417
Geology by C. B. Hunt, 1957

GEOLOGIC MAP OF THE DEATH VALLEY SALT PAN, CALIFORNIA

SCALE 1:96 000



CONTOUR INTERVAL 40 AND 80 FEET
DOTTED LINES REPRESENT 20 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

QUATERNARY

QUATERNARY