

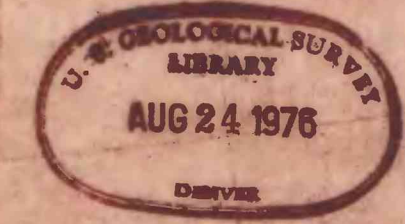
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IN BACK OF BOUND VOLUME



MAP SHOWING ENGINEERING ASPECTS  
OF KARST IN THE UNITED STATES

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1976  
Scale 1:7.5 million



U. S. Geological Survey  
OPEN FILE MAP 76-623  
This map is preliminary and has  
not been edited for conformity  
with Geological Survey standards  
or nomenclature.

- ENGINEERING ASPECTS OF KARST**
- EXPLANATION**
- CAVERNOUS**
- 1. Fissures, tubes, large caves present to depth of 250 ft.
    - a. Intensely folded, metamorphosed, crystalline limestone and marble.
    - b. Moderately to steeply dipping beds of carbonate rock and gypsum.
    - c. Gently dipping to flat-lying beds of carbonate rock and gypsum; light tint indicates karstic rock up to 250 ft. thick beneath overburden up to 300 ft. thick.
  - 2. Fissures, tubes, small caves present to depth of 50 ft.
    - a. Intensely folded, metamorphosed, crystalline limestone and marble.
    - b. Moderately to steeply dipping beds of carbonate rock and gypsum.
    - c. Gently dipping or flat-lying beds of carbonate rock and gypsum; light tint indicates karstic rock up to 50 ft. thick beneath overburden up to 200 ft. thick.
- NONCAVERNOUS**
- 3. Fissures, tubes, caves generally absent
    - a. Intensely folded, metamorphosed crystalline limestone and marble.
    - b. Gently dipping to flat-lying carbonate rock, dominantly marl and shell.
- PERMEANT**
- 4. a. Subsidence in thick unconsolidated material by piping and deeply buried karst processes; fissures, tubes, and voids to depth of 250 ft.
  - b. Subsidence in thick unconsolidated material by piping and deeply buried karst processes; fissures, tubes, and voids to depth of 50 ft.
- LAVA TERRAIN**
- 5. a. Lava; fissures, tubes, and tunnels to depth of 250 ft.
  - b. Lava; fissures, tubes, and tunnels to depth of 50 ft.
- A - Area of historic subsidence and collapse.  
K - Karst terrain on gypsum.