

- EXPLANATION**
- EASY TO EXCAVATE** — Materials in this category are easier to excavate than materials in the other categories
 - MODERATELY DIFFICULT TO EXCAVATE** — Materials in this category are easier to excavate than some, and are harder to excavate than others
 - DIFFICULT TO EXCAVATE** — Materials in this category are the most difficult to excavate of any geologic materials in the quadrangle

DISCUSSION

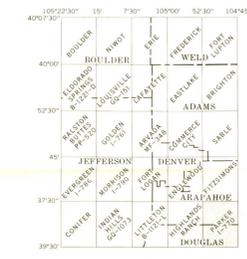
Excavation is the term usually applied to digging out, commonly for development purposes, portions of the geologic materials that form the earth's crust. Geologic materials that occur in the Parker quadrangle vary widely in their resistance to such excavation. These materials range from loosely consolidated silt, sand, and gravel to firmly cemented mudstone, siltstone, and sandstone. They have been grouped into three categories on this map, according to their "relative excavatability" that is, the ease with which they may be excavated at the site of their natural occurrence. The excavatability of each unit is relative only to that of the others, and is not related to a numerical index or a standard test. Further, the classifications apply to the geologic units mapped at the surface (Maberry and Lindvall, 1972), but not to underlying geologic units. In making these classifications no consideration has been given to the use of any specific mechanical excavating equipment or to any physical property other than ease of excavation. Except for the Arapahoe County Airport, man-made structures and artificial fill have not been classified and are not shown on this map.

In general, the materials in the *easy to excavate* category include the geologically recent alluvium along streamcourses and wind-deposited silt and sand on the uplands. Materials in the *moderately difficult to excavate* category are the older, more compact alluviums of Pleistocene age. The bedrock materials consisting of mudstone, siltstone, and sandstone are placed in the *difficult to excavate* category. These rankings of materials in relative excavatability categories are based on field investigations during geologic mapping of the quadrangle and on discussions with local homeowners, county road department personnel, and construction contractors.

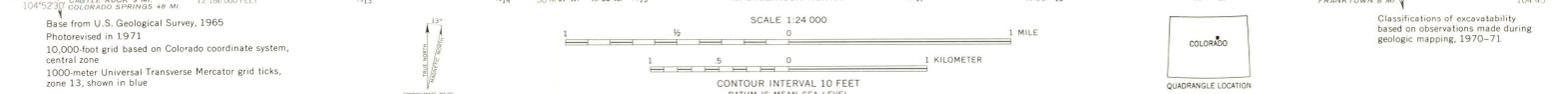
In view of the wide variety of geologic materials in the quadrangle, and the sometimes complex relationship of these materials, any excavatability category on the map may include material at specific local sites that differs from the prevailing materials and, therefore, in ease of excavation from that assigned to the map category. The interpretations of ease of excavation generally apply to broad areas for planning purposes rather than to specific sites. The excavation conditions of specific sites should be investigated in detail by specialists in that field.

REFERENCE

Maberry, J. O., and Lindvall, R. M., 1972, Geologic map of the Parker quadrangle, Arapahoe and Douglas Counties, Colorado: U.S. Geological Survey Misc. Geol. Inv. Map I-770-A.



INDEX SHOWING LOCATION OF PARKER QUADRANGLE



MAP SHOWING RELATIVE EXCAVATABILITY OF GEOLOGIC MATERIALS IN THE PARKER QUADRANGLE, ARAPAHOE AND DOUGLAS COUNTIES, COLORADO

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