

72mm
(200)

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
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PREPARED IN COOPERATION WITH THE
U. S. ATOMIC ENERGY COMMISSION

PHOTOGEOLOGIC MAP CLAY HILLS - 9
UTAH, SAN JUAN COUNTY
TRACE ELEMENTS MEMORANDUM REPORT 681

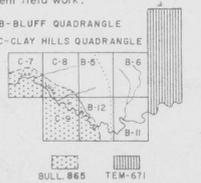


EXPLANATION

- Qu
Undifferentiated sand, residual mantle, and slope wash
- Pcc
 Pcha
Cutter formation
Cedar Mesa sandstone member, Pcc; Halgaito tongue, Pcha, possibly including upper unit of Rico formation
- PPr1
Lower unit of the Rico formation
- Ph
Hermosa formation
- Contact
Can be located within 30 feet horizontally.
- Contact
Can be located within 30 to 200 feet horizontally.
- Contact
Cannot be located accurately, probable error greater than 200 feet horizontally.
- Resistant bed within a formation
May be traceable only locally.
- Fault
Dashed where approximately located.
U, upthrown side, D, downthrown side.
- Anticline
Showing crest line and direction of plunge
Approximately located.
- Strike and dip of beds
Based on field measurement.
- Strike and dip of beds
Computed by photogrammetric methods.
- Approximate strike and dip of beds
Based on photointerpretation.
- Inferred strike and dip of beds
Based on photointerpretation of areas where bedding is obscure.
- Strike of approximately vertical joints
Based on photointerpretation.
- Gravel pit
- Irrigation ditch
- Reservation boundary
Approximate location.
- Secondary road
- Trail
- Fence

QUATERNARY
PERMIAN
PENNSYLVANIAN

NOTE: Planimetric and geologic detail on this map, Clay Hills 9, does not join that on Clay Hills 16 owing to a more recent and accurate base map compilation for Clay Hills 9 and owing to new geologic interpretation resulting from recent field work.



The contact between the Cutler and Rico formations has been mapped in the field stratigraphically lower west of the dotted line (U. S. Geol. Survey Bull. 865, 1936) than it has been east of the dotted line (U. S. Geol. Survey Trace Elements Memo. Rept. 671, unpublished). On the photogeologic maps indicated in the index map above, the stratigraphic interval between these "contacts" has been mapped as the upper part of the Rico formation east of the dotted line and has been included in the Halgaito tongue of the Cutler formation west of the dotted line.

Base map compiled by U. S. Geological Survey from vertical aerial photographs.
The aerial photographs used for photogeologic interpretation were taken in September, October, and November, 1962.

4	3	2	1
5	6	7	8
9	10	11	12
13	14	15	16

CLAY HILLS QUADRANGLE

PHOTOGEOLOGY BY P. P. ORKILD
SCALE 1:24,000
NOVEMBER 1954

Roads as classified in this map series are as follows:
Primary roads are maintained and graded, traversable by two-wheel-drive vehicles; secondary roads are traversable possibly by four-wheel-drive vehicles; trails are not traversable by four-wheel-drive vehicles except locally. When other information is lacking, roads are classified by their appearance on aerial photographs.

Stratigraphic column for this area modified from U. S. Geol. Survey Trace Elements Memo. Rept. 671 and U. S. Geol. Survey Bull. 865, 1936. Geographic and geologic field data from Bull. 865 and U. S. Geol. Survey Water-Supply Paper 538, 1924.
This map has been compiled mainly from photogeologic data but has not been checked in the field since it has not had the benefit of thorough evaluation with respect to maps compiled entirely from field data.

This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.