

DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
ATOMIC ENERGY COMMISSION

PHOTOGEOLOGIC MAP, BLUFF-12
UTAH-SAN JUAN COUNTY
TRACE ELEMENTS MEMORANDUM REPORT 848



EXPLANATION

SEDIMENTARY ROCKS

- Qu
Undifferentiated sand, residual mantle, and slope wash
- Pcc
Pcha
PPrU
PPrI
Cutter formation
Cedar Mesa sandstone member, Pcc;
Halgaito tongue, Pcha
- PPh
Hermosa formation
- Rice formation
Upper unit, PPrU;
lower unit, PPrI

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
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

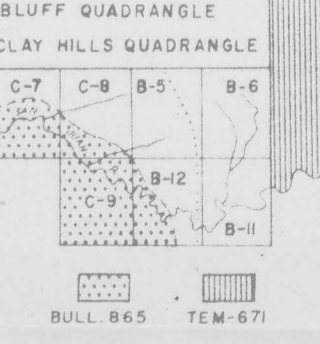
Inferred strike and dip of beds
Based on photointerpretation of
areas where bedding is obscure

Strike of approximately vertical joints
Based on photointerpretation

Linear feature uninterpretable on photograph
May be geologically significant

- Dry hole
- Gravel pit
- Diversion channel
- Reservation boundary
- Primary road
- Secondary road
- Trail

NOTE: Planimetric and geologic detail on this map, Bluff-12, does not properly join that on Bluff-13 owing to a more recent and accurate base map compilation and to new geologic interpretation resulting from recent field work.



The contact between the Cutler and Rico formations is mapped stratigraphically lower west of the dotted line (U. S. Geol. Survey Bull. 865, 1936) than it is east of the dotted line (U. S. Geol. Survey Trace Elements Memo. Rept. 671, 1954). 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 north of San Juan River modified from Soil Conservation Service map, Utah-369. Base map south of San Juan River compiled by U. S. Geological Survey from aerial and photogeologic data. The aerial photographs used for photogeologic interpretation were taken in September, October, and November, 1962.

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

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

BLUFF QUADRANGLE

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

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

Stratigraphic column for this area modified from U. S. Geol. Survey Trace Elements Memo. Rept. 671, 1954. See also U. S. Geol. Survey Bull. 865, 1936, and U. S. Geol. Survey Bull. 966, 1951, and U. S. Geol. Survey Water Survey Paper 1034-B.

This map has been compiled mainly from photogeologic data that has not been checked in the field. Hence it is not the product of thorough evaluation with respect to maps compiled solely from field data.