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DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
ATOMIC ENERGY COMMISSION

PHOTOGEOLOGIC MAP, TIDWELL-8
UTAH - GRAND AND EMERY COUNTIES

TRACE ELEMENTS MEMORANDUM REPORT 811

EXPLANATION

QUATERNARY

Qal | Qt | Qc
Alluvium, Qal; terrace deposits ?, Qt; covering deposits, undifferentiated, Qc

CRETACEOUS

Upper Cretaceous
Km
Mancos shale
(Tununk shale member(?))

Lower and Upper Cretaceous
Kd
Dakota sandstone

Lower Cretaceous
Kbu / Kbl
Probable equivalent of Burro Canyon formation, Upper unit, Kbu; lower unit, Kbl

JURASSIC

Upper Jurassic
Jmbb / Jms
Morrison formation
Brushy Basin shale member, Jmbb; Salt Wash sandstone member, Jms

Js
Summerville formation

Jcu
Curtis formation

Je
Entrada sandstone

Middle and Upper Jurassic
Jc
Carmel formation

Lower Jurassic
Jn
Navajo sandstone

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

Probable contact

Fault
Dashed where approximately located
U, upthrown side; D, downthrown side
Questioned where probable

Strike and dip of beds
Based on field measurement

Approximate strike and dip of beds
Based on photo-interpretation

Inferred strike and dip of beds
Based on photo-interpretation of areas where bedding is obscure

Strike of approximately vertical joints
Based on photo-interpretation

Linear feature uninterpretable on photograph
May be geologically significant

Dry hole

Mine

Irrigation ditch

County boundary

Primary road

Secondary road

Trail

Fence

Note: The lower unit of the probable equivalent of the Burro Canyon formation is believed to be the Buckhorn conglomerate of Stokes and the upper unit, the Cedar Mountain shale of Stokes (Geol. Soc. America Bull., vol. 55, 1944).

In the area between the C. F. & I. manganese workings and the Green River, E. T. McKnight includes as the lower part of the Salt Wash sandstone member of the Morrison formation, a limestone and gypsum unit that is as much as 30 feet thick. The base of this unit cannot be recognized clearly on aerial photographs, therefore it is here mapped as a part of the Summerville formation.

All contacts along the southern boundary of this map do not join those of Tidwell 9 owing to the use of more recent and better photographs covering Tidwell 8.

Base map compiled by U.S. Geological Survey from vertical aerial photographs.

The aerial photographs used for photogeologic interpretation were taken in July and August 1952.

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

TIDWELL QUADRANGLE

15°30'
TRUE NORTH
MAGNETIC NORTH

PHOTOGEOLOGY BY V. H. SABLE
SCALE 1:24,000
0 — 1 MILE
JULY 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 two-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 unpublished section by L. C. Craig and U.S. Geol. Survey Bull. 908, 1940). Geographic and geologic field data from General Highway Map, Grand County, Utah by Utah State Road Commission and U. S. Dept. of Agriculture (1940); U. S. Geol. Survey Bull. 908, 1940), and U. S. Geol. Survey Bull. (541) pl. 6, (1914).

Maps of this series have been compiled mainly from photogeologic data but have not been checked in the field; hence they have not had the benefit of thorough evaluation with respect to maps compiled entirely from field data.