



Base map by U.S. Geological Survey  
Preliminary edition, 1964  
Mapped by Pacific Area, Geological Survey

This is an unedited copy of an original manu-  
script including field additions made in 1964

TRUE NORTH  
MAGNETIC NORTH  
APPROXIMATE MEAN  
DECLINATION, 1964

SCALE 1:24,000  
1 000 0 1000 2000 3000 4000 5000 6000 7000 FEET  
CONTOUR INTERVAL 40 FEET  
DASHED LINES REPRESENT 20-FOOT CONTOURS  
DATUM IS MEAN SEA LEVEL

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

Geology by H.D. Zeller  
assisted by J.W. Mercer, 1964  
DAVE CANYON, UTAH  
GARFIELD CO.

EXPLANATION

- Recent**
- Qal**  
Alluvium  
Stratified sand, silt, and gravel deposits; includes coarse unsorted flood deposits in Alvey Wash
  - Qac**  
Alluvium and colluvium  
Sand, silt, and clay deposited by slope wash from the Straight Cliffs and mixed with alluvium
  - Qae**  
Alluvium and eolian deposits  
Mostly silt and sand reworked by wind and running water. Found mostly on rolling surfaces between tributaries of Alvey Wash
  - Qc**  
Colluvium  
Unstratified slope wash made up of clay, silt, sand, and gravel
  - Qis**  
Landslide deposits  
Commonly blocks of sandstone from the Straight Cliffs Sandstone that have moved down steep slopes and lie on the Tropic Shale
- Upper Cretaceous**
- Kw**  
Wahweap Formation  
Mostly olive-gray claystone and mudstone alternating with beds of grayish-orange medium-grained sandstone. Sandstone beds are very lenticular and have concretionary appearance near base. Sandstone beds increase in number and are a dark-yellowish-gray 500 feet above base. Only the lower 720 feet of the 1,000-foot-thick formation is exposed
  - Ks**  
Straight Cliffs Sandstone  
Grayish-orange, tan, and light-gray fine- to medium-grained sandstone that forms massive cliffs, interbedded with gray shale, carbonaceous shale, siltstone, and coal. Some of the more persistent sandstones nearly to top of formation are marine and are interbedded with generally nonmarine beds. The base of a marine sandstone, about 400 feet above base, is designated bed A on map. The two main coal zones are 1,170 and 770 feet, respectively, above base. Total thickness about 1,550 feet
  - Kt**  
Tropic Shale  
Olive-gray shale; in upper half a few thin grayish-orange fine-grained beds of sandstone that become more prominent in upper 100 feet; some thin beds of bentonite and limestone concretions near base. Total thickness about 800 feet
  - Kd**  
Dakota Formation  
Grayish-orange sandstone interbedded with light-olive-gray shale in upper half; coal beds may be present in about middle of formation; brownish-black carbonaceous claystone, shale, and siltstone and some beds of grayish-orange sandstone in lower part; at some places conglomerate occurs at base. Total thickness about 140 feet
- Lower(?) Cretaceous**
- UNCONFORMITY**
- Jm**  
Morrison Formation  
Mostly massive light-gray fine-grained sandstone; some interbedded greenish-gray and reddish-brown shale; upper part is conglomeratic sandstone. Total thickness varies because of unconformity with overlying Dakota; about 80 to 130 feet thick
- Upper Jurassic**
- Js**  
Summerville Formation  
Mottled dark-reddish-brown and grayish-olive claystone and siltstone; a thin lenticular yellowish-gray limestone 16 feet from top; one yellowish-gray sandstone bed near middle. Total thickness about 40 to 60 feet
  - Je**  
Entrada Sandstone  
Light-gray to very pale orange fine-grained massive sandstone in upper 300 feet; interbedded reddish-brown sandstone and gray shale in middle 300 feet; reddish-brown silty sandstone (not exposed) in about basal 300 feet. Total thickness about 900 feet
- Middle and Upper Jurassic**
- Jc**  
Carmel Formation and Navajo Sandstone  
Jc, Carmel Formation; light-brown siltstone in upper 100 feet; in middle, mottled reddish-brown to greenish-gray siltstone unit, 300 feet thick, that contains much gypsum; thin-bedded crinkly yellowish-gray limestone in lower 120 feet. Total thickness 520 feet  
Jnu, unnamed unit in Navajo Sandstone; yellowish-gray fine-grained massive crossbedded sandstone, cliff-forming, includes a parting of pale-reddish-brown calcareous siltstone 10 feet thick. Total thickness 56 feet  
Jcu, unnamed unit of Carmel Formation; pale-reddish-brown calcareous siltstone that contains some interbeds of limestone and shale; ripple marks conspicuous in thin beds near top. Total thickness about 40 feet  
Jn, Navajo Sandstone; grayish-orange medium- to fine-grained sandstone; large-scale festoon crossbedding; cliff-forming and calcareous. Only upper 100 to 200 feet of Jurassic age exposed. Thickness in subsurface which includes beds of Triassic(?) age about 1,500 feet

- Coal bed**  
Dashed where inferred; number refers to coal section shown on sheet 2
- Clunker of burned coal bed**  
Approximately located
- Contact**  
Approximately located
- Anticline**  
Showing troughline; approximately located
- Strike and dip of beds**
- Apparent dip**
- Tenneco Oil Co. "A" 1 Govt.**
- Dry hole**

M(200)  
R290  
no. 68-339  
sheet  
1 of 2  
C.1

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PRELIMINARY GEOLOGIC MAP OF THE DAVE CANYON QUADRANGLE, GARFIELD COUNTY, UTAH

By  
Howard D. Zeller  
1967

Utah (Dave Canyon quad.) geol. 1:24,000. 1967.  
sheet 1,  
cap. 1.