

(300)
Tolun
no. 931



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
U. S. ATOMIC ENERGY COMMISSION

TRACE ELEMENTS
MEMORANDUM REPORT 921

EXPLANATION

Qvf

Valley fill

Predominantly wind-deposited sand and silt, in places as dunes; includes some alluvium and residual soil.

Qal

Alluvium

Stream deposited silt, sand and gravel; locally with carbonaceous material and charcoal. Recent erosion has cut arroyos into most of the alluvium.

Rm

Rel

Chinle formation

Mesa Beck member, Rm, massive tan to light-gray conglomeratic sandstone, contains uranium deposits in the Elk Ridge area; lower Chinle, Rel, blue, gray, and red mudstone.

UNCONFORMITY

Rm

Moenkopi formation

Red, buff, and brown shale and sandstone. Shale, dominant near the top and base of the formation, is interbedded with thin flaggy sandstone beds. Some thick sandstone beds occur near the middle of the formation. Individual sandstone beds are discontinuous and generally grade laterally into shale within half a mile.

Pch

Pco

Pcc

Cutler formation

Hoskinnini tongue, Pch, reddish to buff silty sandstone and a few interbeds of siltstone; sandstone characterized by scattered very coarse frosted quartz grains; Organ Rock tongue, Pco, massive red sandy siltstone; Cedar Mesa sandstone member, Pcc, massive festoon crossbedded light-gray sandstone.

PFr

Rico formation

Interbedded thin impure sandy limestone, limy sandstone, festoon crossbedded sandstone, and silty shale; contains some marine fossils. The contact with the overlying Cedar Mesa is drawn at the top of the uppermost fossiliferous limestone. In the Beef Basin area the formation is dominantly sandstone and can be separated from the Cedar Mesa only by the presence of a few thin purple to gray limestones near the top.

Ph

Hermosa formation

Interbedded limestone, sandstone, and silty shale; marine fossils generally abundant. The contact with the overlying Rico is drawn at the top of the highest fusulinid-bearing limestone. Limestone, much more abundant than in the overlying Rico, commonly contains less clastic material and more fossils.

Contact

(Dashed where approximately located; dotted where concealed).

U D Fault

(Dashed where approximately located; dotted where concealed; U, upthrown side, D, downthrown side; showing field estimate of amount of displacement in feet)

U ? - ? - ?

Doubtful or probable fault

(U, probable upthrown side; D, probable downthrown side)

Anticline

(Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located)

Syncline

(Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located)

Anticlinal bend

(Showing trace of plane of inflection between gently dipping and more steeply dipping beds, and direction of plunge of intersection with structure contour horizon. Dashed where approximately located)

Strike and dip of beds

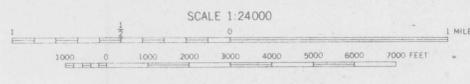
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Structure contour

Drawn on base of Cedar Mesa sandstone member of the Cutler formation. Dashed where approximately located; short dashes indicate projection above surface. Contour interval 100 feet. Datum is mean sea level.

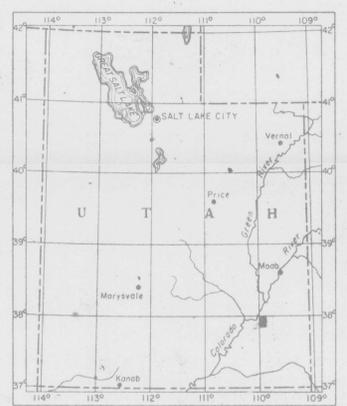


Mapped by the Geological Survey 1954
Topography by multiplex methods from
aerial photographs taken 1952



CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

GEOLOGY BY R. Q. LEWIS, SR., AND
R. H. CAMPBELL, ASSISTED BY
P. H. REITAN AND B. F. BROCK, 1954-55



INDEX MAP OF UTAH SHOWING AREA OF THIS REPORT

PRELIMINARY GEOLOGIC MAP OF ELK RIDGE 2 NW QUADRANGLE, SAN JUAN COUNTY, UTAH

by

Richard Q. Lewis, Sr., and Russell H. Campbell

QUATERNARY

TRIASSIC

PERMIAN

PENNSYLVANIAN
AND PERMIAN

PENNSYLVANIAN