UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 363
PLATE I

EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY

Recent

- Qal — Alluvium
- Qr — Alluvial-fan deposits
- Qr — Rock-glacier deposits
- Qc — Colluvial sand and gravel

Pleistocene; Wisconsin; Pre-Wisconsin

- Qls — Landslide deposits
- Qt — Till
- Qo — Outwash gravel
- Qtg — Terrace gravel
- Qp — Pediment gravel
- Qb — Boulder deposits

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TERTIARY

- Tfl — Flagstaff limestone
  White locally fossiliferous limestone, white biotitic tuff, tuffaceous sedimentary rocks, and conglomerate; thickness 500 feet or more

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CRETACEOUS

Upper Cretaceous

Mancos shale

- Kmv — Mesaverde formation
  Thick-bedded light-yellow sandstone and thin interbedded dark-gray shale; thickness more than 200 feet
- Kmm — Masuk member
  Bluish-gray and black carbonaceous and sandy shale; interbedded light-yellow sandstone and shaly sandstone; thickness 600 to 800 feet
- Kme — Emery sandstone member
  Thin- to thick-bedded light-yellow lenticular sandstone and interbedded carbonaceous shale and impure coal; thickness about 250 feet
- Kmb — Blue Gate shale member
  Bluish-gray and black carbonaceous shale interbedded with thin light-yellow sandstone beds; thickness about 1400 feet

Lower(?) and Upper Cretaceous

- Kd — Dakota sandstone
  Light-yellow lenticular sandstone and conglomerate with interbedded carbonaceous shale and impure coal locally; fossiliferous; thickness 0 to about 50 feet

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JURASSIC

Upper Jurassic

Morrison formation

- Jmb — Brushy Basin shale member
  Variegated claystone including some white, gray, and buff sandstone and conglomerate lenses; thickness about 160 to about 225 feet
- Jms — Salt Wash sandstone member
  Thick crossbedded lenticular sandstone and conglomeratic sandstone beds including some variegated claystone lenses; thickness generally about 200 feet

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San Rafael group

- Js — Summerville formation
  Thin-bedded reddish-brown shale and siltstone with veinlets and thin layers of gypsum; crossbedded fine-grained sandstone; thickness 133 to 200 feet
- Jcu — Curtis formation
  Thin- to thick-bedded greenish-gray fine-grained sandstone and siltstone; maximum thickness 80 feet

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Middle and Upper Jurassic

Glen Canyon group

- Je — Entrada sandstone
  Thin- to thick-bedded reddish-brown sandstone and siltstone; thickness 475 to 780 feet
- Jca — Carmel formation
  Yellow to grayish-orange very fine to fine-grained sandstone; green and red calcareous claystone; gray fossiliferous limestone; white to gray coarsely crystalline gypsum; thickness slightly more than 200 feet to almost 1000 feet

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Glen Canyon group

- Jn — Navajo sandstone
  White to yellow crossbedded fine-grained sandstone; thickness 800 to 1100 feet
- Jk — Kayenta formation
  Irregularly bedded white to reddish-brown siltstone, conglomerate, and very fine to medium-grained sandstone; thickness about 250 feet
- Jw — Wingate sandstone
  Very fine grained reddish-brown cliff-forming sandstone; massive and crossbedded; thickness generally about 320 feet

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TRIASSIC

Upper Triassic

- Trcu
- Trcm
- Trcs

Chinle formation

Upper member consisting largely of variegated claystone, including lenses of pale-red and greenish-gray limestone, and sandstone, Trcu. Middle member consisting of red, reddish-brown, and greenish-gray claystone, crossbedded ripple marked very fine to medium-grained sandstone, and including a prominent sandstone and conglomeratic sandstone bed at the top, Trcm. Shinarump member, light-gray to yellow medium- to coarse-grained crossbedded sandstone, locally conglomeratic, and interbedded claystone lenses, and silicified and carbonized plant remains, Trcs. Thickness 110 to about 340 feet

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Lower and Middle(?) Triassic

- Trmu
- Trml — Moenkopi formation
  The upper part consisting of chiefly reddish-brown and some yellow thin-bedded claystone, siltstone, mudstone and very fine to fine-grained sandstone with gypsum and selenite as thin layers and veinlets, Trmu; and the lower part consisting of yellow to reddish-brown thin-bedded siltstone and including at the top the Sinbad limestone member consisting of thin- to medium-bedded fossiliferous yellowish-gray limestone and dolomite, Trml; angular chert-pebble conglomerate locally at base; thickness 766 to 985 feet

TRIASSIC

UNCONFORMITY

PERMIAN

- Pk — Kaibab limestone
  White calcareous siltstone and silty, locally fossiliferous, limestone with many chert layers and nodules; thin crossbedded white fine-grained sandstone beds particularly in lower part; some dolomite; thickness 250 to 350 feet
- Pc — Coconino sandstone
  Light-yellow very fine to fine-grained sandstone, massive crossbedded; thickness more than 800 feet

IGNEOUS ROCKS

TERTIARY

- Tf — Chiefly lava flows with interbedded tuffaceous sedimentary rocks
- Ts — Chiefly tuffaceous sedimentary rocks with interbedded lava flows
- Ti — Intrusive rocks; locally dike along fault where movement is indicated

Contact
Dashed where approximately located

Fault
Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side

Strike and dip of beds

Strike of vertical beds

Horizontal beds

Structure contour
Drawn on top of Chinle formation. Dashed where approximately located. Contour interval 200 feet except locally where 100-foot interval accentuates closure. Datum is mean sea level

Limit of area scoured by Wisconsin glacial ice on top of Boulder Mountain; knobs on scoured side

Direction of ice flow

Prospect

Shaft

Mine adit

Quarry or gravel pit

Dry hole

APPROXIMATE MEAN DECLINATION, 1963

Base from U. S. Geological Survey topographic quadrangles, 1952.

Geology by J. F. Smith, Jr., L. C. Huff, E. N. Hinrichs, and R. G. Luedke, 1951–53

Quaternary deposits not shown on sections.
Map units combined:
- K, Cretaceous, undivided
- Jsc, Summerville and Curtis formation
- Jm, Morrison formation
- Trc, Chinle formation
- Trm, Moenkopi formation

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—10208

GEOLOGIC MAP AND SECTIONS OF THE CAPITOL REEF AREA, WAYNE AND GARFIELD COUNTIES, UTAH

SCALE 1:62 500

1 ½ 0 1 2 3 MILES

CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL