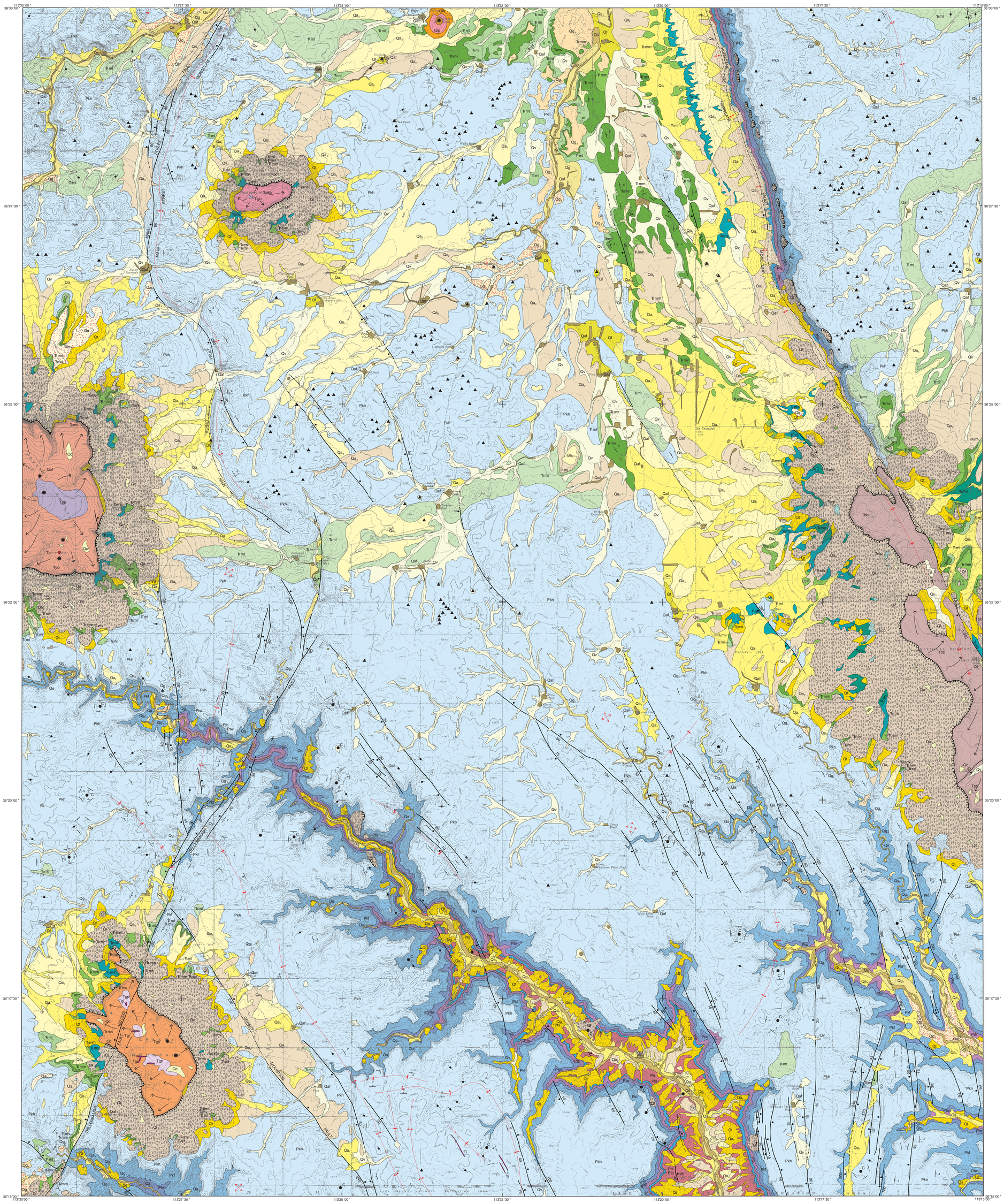
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

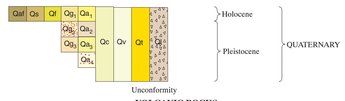
Prepared in cooperation with the
U.S. NATIONAL PARK SERVICE

MISCELLANEOUS FIELD STUDIES
MF-2343, Version 1.0
Pamphlet accompanies map

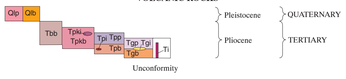


CORRELATION OF MAP UNITS

SURFICIAL DEPOSITS



VOLCANIC ROCKS



SEDIMENTARY ROCKS

LIST OF MAP UNITS

Surficial Deposits

Surficial deposits (Holocene and Pleistocene)

- Qaf — Artificial deposits (Holocene)
- Qs — Stream-channel alluvium (Holocene)
- Qf — Floodplain deposits (Holocene)
- Qg_1 — Young terrace-gravel deposits (Holocene)
- Qa_1 — Young alluvial-fan deposits (Holocene)
- Qc — Colluvial deposits (Holocene and Pleistocene)
- Qv — Valley-fill deposits (Holocene and Pleistocene)
- Qt — Talus deposits (Holocene and Pleistocene)
- Qls — Landslide deposits (Holocene and Pleistocene)
- Qg_2 — Young intermediate-age terrace-gravel deposits (Pleistocene)
- Qa_2 — Young intermediate-age alluvial-fan deposits (Holocene and Pleistocene)
- Qg_3 — Older terrace-gravel deposits (Pleistocene)
- Qa_3 — Older intermediate-age alluvial-fan deposits (Pleistocene)
- Qa_4 — Older alluvial-fan deposits (Pleistocene)

Volcanic Rocks

Little Tanks Basalt (Pleistocene, 1.0±0.4 ma)

- Qlp — Pyroclastic deposits
- Qlb — Basalt Flow

Bundyville basalt (Pliocene, 3.6±0.18 ma)

- Tbb — Basalt flows

Basalt of Poverty Knoll (Pliocene)

- Tpki — Intrusive dike
- Tpkb — Basalt flow

Poverty Mountain Basalt (Pliocene, 4.75±0.26 ma)

- Tpi — Intrusive neck
- Tpp — Pyroclastic deposits
- Tpb — Basalt flows

Grassy Mountain Basalt (Pliocene)

- Tgi — Intrusive dikes
- Tgp — Pyroclastic deposits
- Tgb — Basalt flows

Intrusive dikes (Pliocene)

- Ti

Sedimentary Rocks

Chinle Formation (Upper Triassic)

- TRc p — Petrified Forest Member

Moenkopi Formation (Middle? and Lower Triassic)

- TRm u — Upper red member (Middle? and Lower Triassic)
- TRm s — Shnabkaib Member (Lower Triassic)
- TRm m — Middle red member (Lower Triassic)
- TRm v — Virgin Limestone Member (Lower Triassic)
- TRm l — Lower red member (Lower Triassic)
- TRm t — Timpoweap Member (Lower Triassic)

Kaibab Formation (Lower Permian)

- Pk h — Harrisburg Member
- Pk d — Fossil Mountain Member

Toroweap Formation (Lower Permian)

- Pt w — Woods Ranch Member
- Pt b — Brady Canyon Member
- Pt s — Seligman Member

Hermit Formation (Lower Permian)

- Ph

Contact -- (Approximate contact for surficial units and between the Harrisburg and Fossil Mountain Members of the Kaibab Formation)

Fault -- Dashed where inferred or approximately located; dotted where concealed; bar and ball on downthrown side. Faults shown as bounding alluvium do not offset alluvium. Number is estimated separation displacement in feet

Landslide Scarp -- Headward scarp of landslide; hachures point in direction of slide

Folds -- Showing trace of axial surface and direction of plunge; dashed where approximately located; dotted where concealed

- **Anticline**
- **Syncline**
- **Doubly plunging syncline**
- **Monocline**
- **Dome**

Strike and dip of beds

- **Inclined** -- Measured in the field
- **Approximate** -- Estimated from aerial photographs
- **Implied** -- Interpreted from aerial photographs, dip amount not determined

Strike of vertical and subvertical joints

Collapse Structure -- Circular collapse structures characterized by strata dipping inward towad central point. On Kaibab Formation surface, (Pkh, Pkf) may reflect collapse of deep seated breccia pipe that originated in Redwall Limestone

Sinkhole -- Enclosed depression or cave

Flow direction of basalt

Volcanic Vent

Base from U.S. Geological Survey, 1:24,000, Cold Spring, Grassy Mountain, Jones Hill, Poverty Knoll; 1971.

Universal Transverse Mercator Projection
1927 North American Datum
Clark 1866 Ellipsoid, Zone 12

TRUE NORTH
MAGNETIC NORTH
13.5°
APPROXIMATE MEAN DECLINATION, 1997

SCALE 1:31,680
1 1/2 0 1 MILE
1 .5 0 1 KILOMETER

ARIZONA
QUADRANGLE LOCATION

Geology mapped 1996-1997

Approved for publication June 30, 2000

GEOLOGIC MAP OF THE UPPER PARASHANT CANYON AND VICINITY MOHAVE COUNTY, NORTHWESTERN ARIZONA

By

George H. Billingsley

Digital Database by Michelle L. Harr and Jessica L. Wellmeyer

2000

This map was printed on an electronic plotter directly from digital files. Dimensional calibration may vary between electronic plotters and between X and Y directions on the same plotter, and paper may change size due to atmospheric conditions; therefore, scale and proportions may not be true on plots of this map.

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