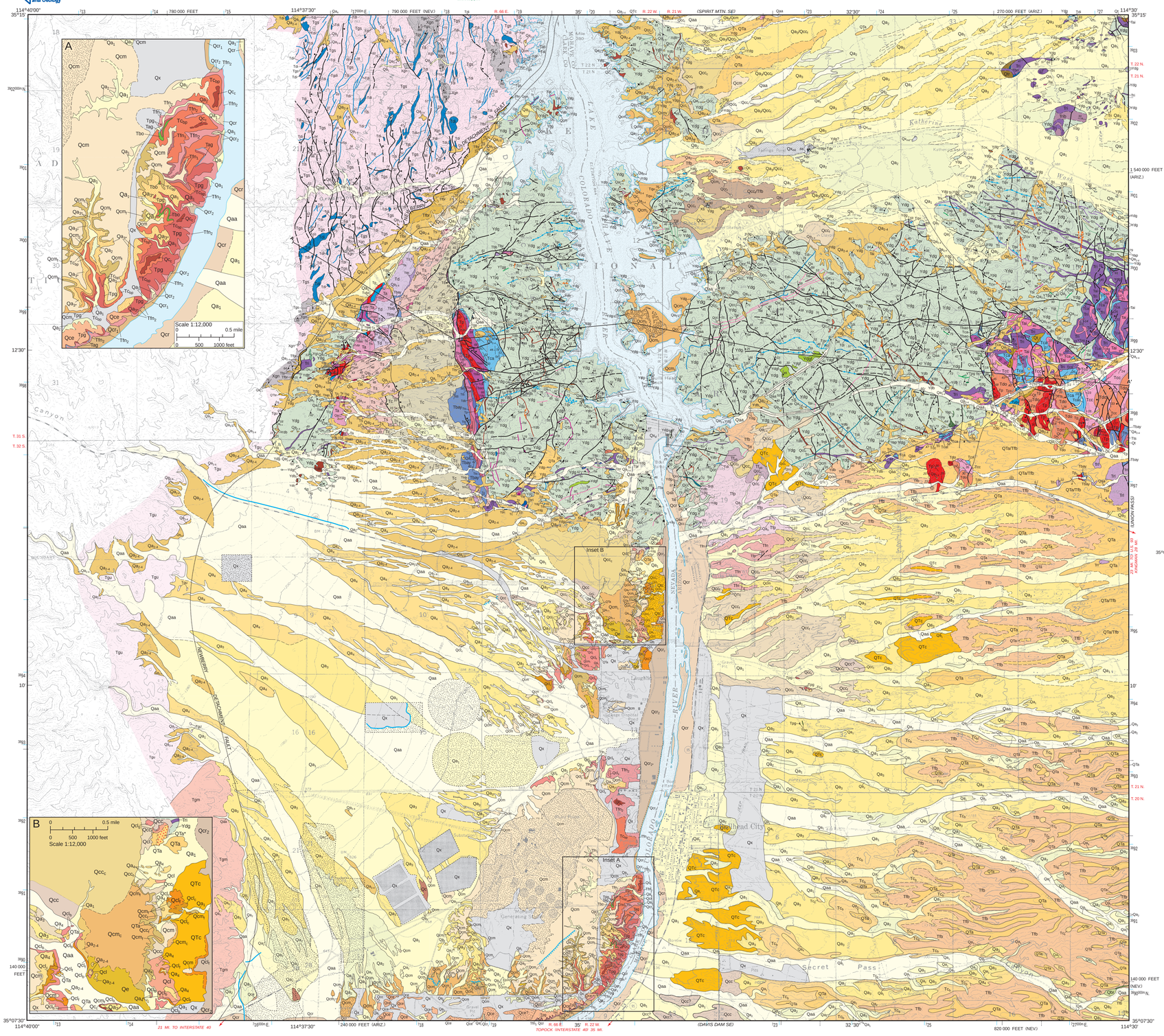
Nevada Bureau of Mines and Geology

USGS Prepared as part of the STATEMAP component of the National Cooperative Geologic Mapping Program in cooperation with the U.S. Geological Survey

PRELIMINARY GEOLOGIC MAP OF THE DAVIS DAM QUADRANGLE, AND THE EASTERN PART OF THE BRIDGE CANYON QUADRANGLE, CLARK COUNTY, NEVADA, AND MOHAVE COUNTY, ARIZONA



QTa/Tfb convention indicates burial of latter unit by former unit

- Qx — **Disturbed, graded, excavated, filled, or otherwise obliterated by human activity**
  - Qxt — Mine tailings
  - Qxd — Mine dump
  - Qxf — Davis Dam facilities
- Qbr — **Megabreccia / mass-wasting deposits. Poorly sorted, angular cobbles and boulders.**
- Qe — **Eolian sand**
- Qt, Qtr — **Talus/colluvium (Qt); Rhyolite colluvium (Qtr)**

Alluvium of the Colorado River

- Qcr — **Holocene alluvium of the Colorado River**
  - Qcr$_1$ — Post-dam alluvium
  - Qcr$_2$ — Pre-dam alluvium
- Qc — **Undivided, Pleistocene alluvium of the Colorado River;** Qc$_c$ Coarse facies, and gravel. Inlcudes gravelly strath veneers, and lags; Qc$_f$ Fine facies, mud and sand
  - Qcc — **Emerald alluvium** Late Pleistocene fluvial mud, sand, and gravel (predominantly gravel)
  - Qcm — **Mohave alluvium** Fluvial mud, sand, and gravel. Qcm$_f$ fine grained facies, mud and sand. Qcm$_c$ coarse facies, sand and gravel
  - Qcc — **Chemehuevi alluvium** Late-middle (?) Pleistocene fluvial mud, sand, and gravel. Qcc$_f$ fine grained facies, mud and sand. Qcc$_c$ coarse facies, sand and gravel
  - Qcl — **Laughlin alluvium** early Pleistocene fluvial mud, sand, and gravel. Qcl$_f$ fine facies, mud and sand; Qcl$_{bp}$ polymictic cobble-boulder conglomerate containing abundant clasts of proterozoic granite from Pyramid Canyon mixed with exotic gravels. Qcl$_p$ Polymictic pebble-cobble gravel.

Quaternary alluvium of the Newberry and Black Mountains

- Qaa — Late Holocene piedmont alluvium. Active channels and alluvial fans. Sand and gravel.
- Qa$_1$ — Holocene piedmont alluvium including active channels and alluvial fans. Sand and gravel.
- Qa$_2$ — Late Pleistocene piedmont alluvium. Sand and gravel.
- Qa$_{2-4}$ — Late-middle Pleistocene piedmont alluvium. Sand and gravel. Pattern indicates deposits of Black Mountain alluvium west of the modern Colorado River
- Qa$_4$ — Middle-early Pleistocene piedmont alluvium. Sand and gravel.

- QTc — **Undivided Plio-Pleistocene alluvium of the Colorado River**
- QTtr — **Rhyolite breccia**
- QTa — **Plio-Pleistocene alluvium of the Newberry and Black Mountains** Pattern indicates deposits of Black Mountain alluvium west of the modern Colorado River

Pliocene alluvium of the Colorado River

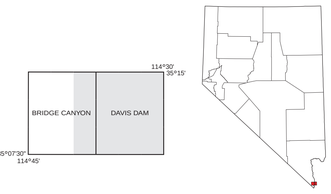
- Tc, Tcc — **Bullhead alluvium** Pliocene Colorado alluvium. Compositionally diverse (exotic), thick alluvial fill of sand, gravel, and mud. Tc$_{bp}$ Panda gravel/Mcompositionally immature, basal gravel of the Bullhead alluvium. Conspicuously black and white speckled pebble-cobble gravel with abundant reworked clasts of Tf2$_u$ mixed with far-traveled, very well rounded siliceous pebbles.

Tertiary piedmont alluvium/fanglomerate

- Tfn — **Tertiary alluvium of the Newberry Mountains**
  - Tfn$_1$ — Pliocene fanglomerate. Sand and gravel with abundant clasts of Tertiary granite. Overlies Bouse formation. Locally interbedded with Tcb.
  - Tfn$_2$ — Miocene fanglomerate. Sand and gravel with abundant clasts of Tertiary granite. Overlain by Bouse formation.
- Tfb — **Mio-Pliocene fanglomerate of the Black Mountains** Sand and gravel with abundant clasts of Tertiary volcanic rocks.
- Tf$_{pc}$, Tfp — **Mio-Pliocene fanglomerate of Pyramid Canyon** Sand and gravel with abundant clasts of Proterozoic granite. **Tfpc**

Late-Miocene transitional deposits

- Tbo — **Bouse formation** Lacustrine marl, mud, and sand.
- Tpg — **Pyramid gravel** Oligomictic cobble-boulder flood conglomerate containing clasts of proterozoic granite from Pyramid Canyon
- Tag — **Axial gravel** Fluvial gravel and sand. Distinct paleochannel deposit containing clasts of Tertiary granite.



Early to Middle Miocene

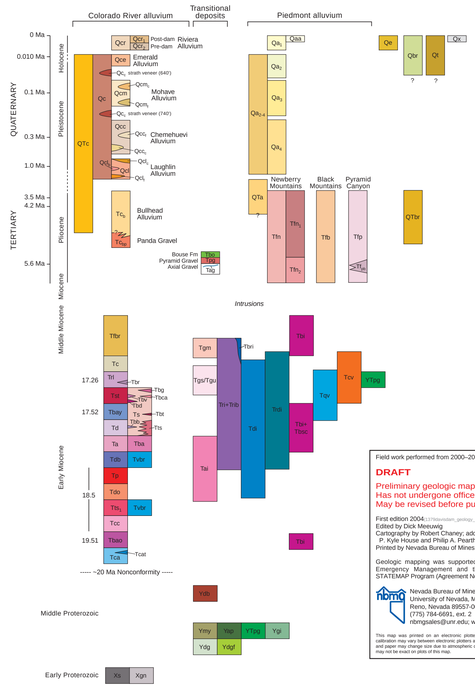
- Tfbr — **Fault breccia along Newberry detachment fault**
- Tc — **Conglomerate containing clasts of Spirit Mountain pluton**
- Tbv — **Volcanic megabreccia**
- Tbg — **Granitic megabreccia**
- Tbd — **Dacite megabreccia**
- Tbt — **Tuff megabreccia**
- Tbca — **Conglomerate megabreccia**
- Ts — **Conglomerate and sandstone**
- Tbb — **Basaltic andesite megabreccia**
- Trl — **Rhyolite lavas; Rhyolite breccia**
- Tbay — **Basaltic andesite lavas**
- Tts — **Tuffaceous rocks**
- Td — **Dacite lavas**
- Ta, Tba — **Andesite lavas; basaltic andesite lavas**
- Tdb, Tvbr — **Dacite breccia; volcanic breccia**
- Tp — **Peach Springs Tuff**
- Tsl — **Tuffaceous sedimentary rocks**
- Tdo — **Dacite lavas**
- Tts$_1$, Tvbr — **Tuffaceous rocks**
- Tcc — **Tuff of Cook Canyon**
- Tbas — **Basaltic andesite lavas**
- Tcat, Tcb — **Arkosic conglomerate; Tcat** Nonwelded tuff and tuffaceous sedimentary rock

Intrusions

- Tbi — **Basalt and basaltic andesite dikes**
- Tbsc — **Scoriaceous basalt related to Tbi**
- Tri, Trhd — **Rhyolite dikes; Tbri, rhyolite dike breccia**
- Trib — **Biotite rhyolite dikes**
- Tai — **Andesite dikes**
- Trd — **Rhyodacite dikes**
- Tdi — **Diorite dikes**
- Tgpi — **Porphyritic biotite granodiorite dikes**
- Tcv — **Calcite veins**
- Tqv — **Quartz veins**
- Tgm — **Mirage Pluton**
- Tgs — **Spirit Mountain pluton**
- Tgu — **Tgs and lesser Xgn undifferentiated**

Proterozoic

- Ypm — **Pegmatite dikes and pods**
- Ydb — **Diabase dikes**
- Ymy — **Mylonitized Davis Dam granite**
- Yap — **Aplite dikes**
- Ygi — **Granitic dikes**
- Ydgf — **Finer-grained felsic phase of Davis Dam granite**
- Ydg — **Megacrysitic Davis Dam granite**
- Xgn — **Gneiss**
- Xs — **Biotite schist**



Field work performed from 2000–2004.

DRAFT

Preliminary geologic map.
Has not undergone office or field review.
May be revised before publication.

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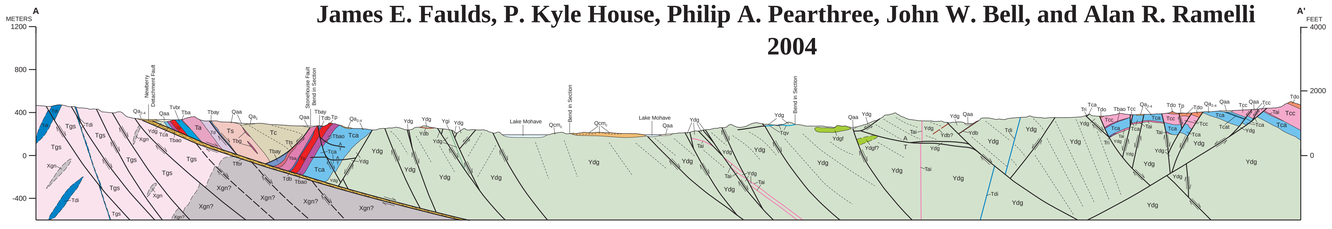
James E. Faulds, P. Kyle House, Philip A. Pearthree, John W. Bell, and Alan R. Ramelli

2004



Scale 1:24,000

0 0.5 1 kilometer

0 0.5 1 mile

0 1000 2000 3000 4000 5000 feet

CONTOUR INTERVAL 40 FEET

Base map: U.S. Geological Survey Davis Dam, Ariz.-Nev. 7.5' Quadrangle, 1983, and Bridge Canyon, Nev. 7.5' Quadrangle, 1981
Projection: Universal Transverse Mercator, zone 11, 1983 North American Datum
1000-meter Universal Transverse Mercator grid ticks, shown in blue

Lithologic contact Dashed where inferred or approximately located due to poor exposures, short dashes indicate approximate contact interpreted from aerial photo.

Moderately to steeply dipping normal fault showing dip Ball on downthrown side; arrow shows trend of striae on fault surface; dashed where inferred or approximately located due to poor exposures; dotted where concealed.

Gently dipping normal fault showing dip Hachures on downthrown side; dashed where inferred or approximately located due to poor exposures; dotted where concealed.

Fluvial scarp

Vein

Vein, emplaced along fault Showing dip.

Flood control structure

Strike and dip of bedding

Inclined — Horizontal — Overturned

Strike and dip of compaction foliation in ash-flow tuff

Inclined

Strike and dip of flow bands in lava or intrusion

Inclined — Vertical

Strike and dip of metamorphic foliation; arrow shows trend of stretching lineation.

Inclined — Vertical

Strike and dip of joints

Inclined — Vertical

Folds

Inclined minor antiform, showing bearing and plunge of hingeline.

Stipple pattern indicates areas of significant disturbance due to agricultural, residential, commercial, or industrial development.