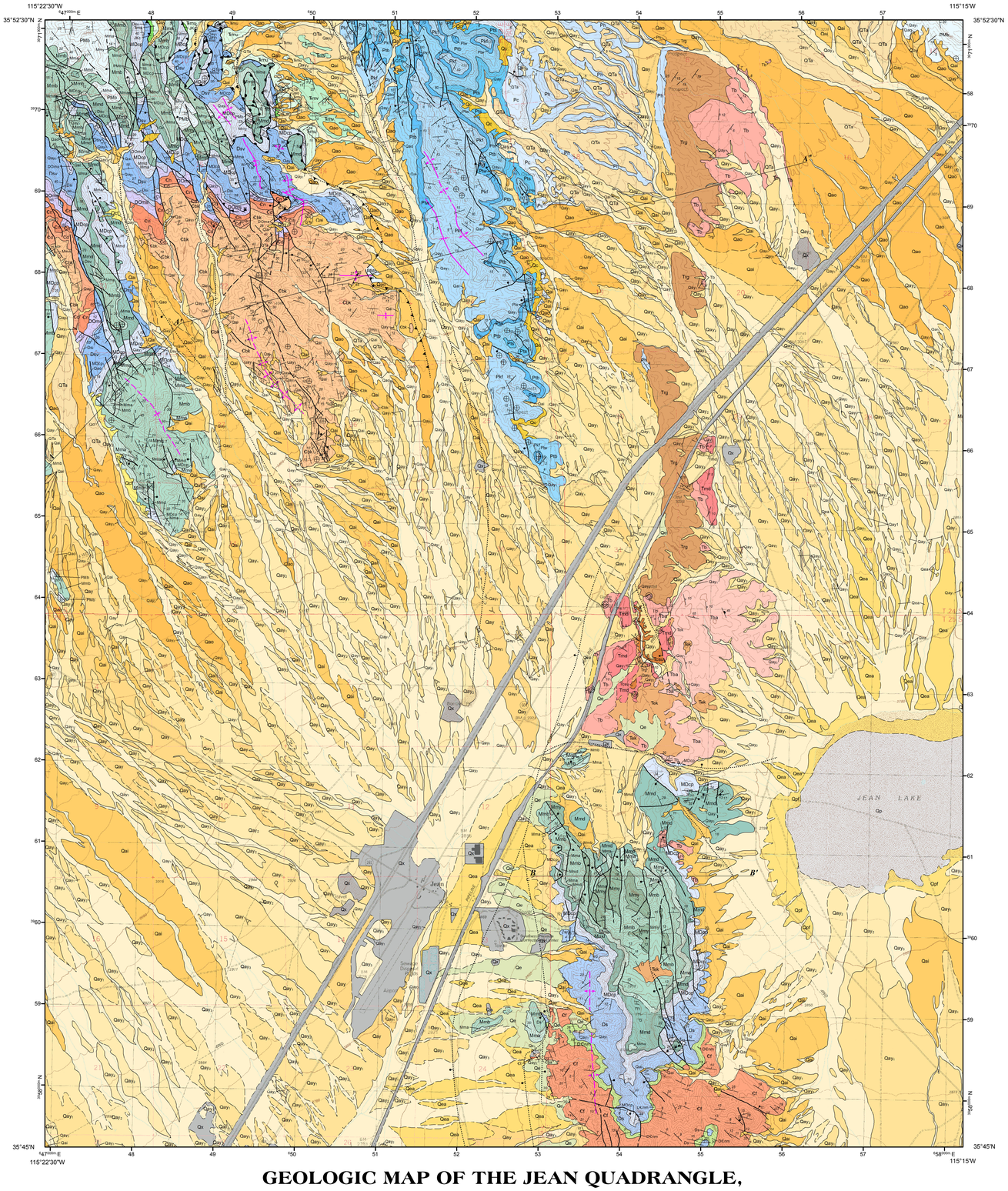
Primarily supported by the U.S. Bureau of Land Management through the Southern Nevada Public Land Management Act (SNPLMA). Research on surficial deposits was also supported by the Clark County Regional Flood Control District and the U.S. Geological Survey STATEMAP Program.



GEOLOGIC MAP OF THE JEAN QUADRANGLE, CLARK COUNTY, NEVADA

Larry J. Garside[1], P. Kyle House[1], B. Clark Burchfiel[2], Stephen M. Rowland[3], and Brenda J. Buck[3]

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2012

Anthropogenic Features and Deposits

- **Qx** — **Disturbed and modified areas**

Playa and Related Deposits

- **Qp** — **Playa deposits (latest Holocene to late Pleistocene(?))**
- **Qpf** — **Playa fringe deposits (Holocene to late Pleistocene)**

Eolian Deposits

- **Qe** — **Eolian sand (Holocene to late Pleistocene)**
- **Qea** — **Mixed eolian sand and alluvium (early Holocene to late Pleistocene)**

Hillslope Deposits

- **Qc** — **Colluvium (Holocene to Pleistocene)**
- **Qcf** — **Colluvium and debris fans (Holocene to Pleistocene)**

Alluvial Deposits

- **Qay** — **Young alluvium, undivided (Holocene to late Pleistocene)**
- **Qay_3** — **Young active alluvium (late Holocene)**
- **Qay_2** — **Young active alluvium and recently abandoned active alluvial surfaces (Holocene)**
- **Qay_1** — **Young inactive alluvium (early Holocene to late Pleistocene)**
- **Qai** — **Intermediate alluvium, undivided (late to middle Pleistocene)**
- **Qao** — **Old alluvium (middle to early Pleistocene)**

Ancient Surficial Deposits, Early Pleistocene (?) to Late Miocene

- **QTa** — **Ancient alluvium (early Pleistocene to late Miocene)**
- **Tek** — **Ancient petrocalcic soil remnants (Pliocene to late Miocene)**

Pliocene to Miocene Rocks

- **Tcsu** — **Younger sedimentary rocks (Pliocene or Miocene)**
- **Tba** — **Basalt (Miocene)**
- **Tmd** — **Tuff of Mount Davis (middle Miocene, 15.0 Ma)**
- **Tb** — **Tuff of Bridge Spring (middle Miocene, 15.2 Ma)**
- **Trg** — **Roundstone gravels (Miocene)**

Cretaceous to Triassic Rocks

- **JKc** — **Conglomerate (Cretaceous or Jurassic)**

Moenkopi Formation (Triassic)

- **Ŧmu** — Upper red member
- **Ŧmv** — Virgin Limestone Member

Permian to Cambrian Rocks

Kaibab Formation (Permian)

- **Pkf** — Fossil Mountain Member

Toroweap Formation (Permian)

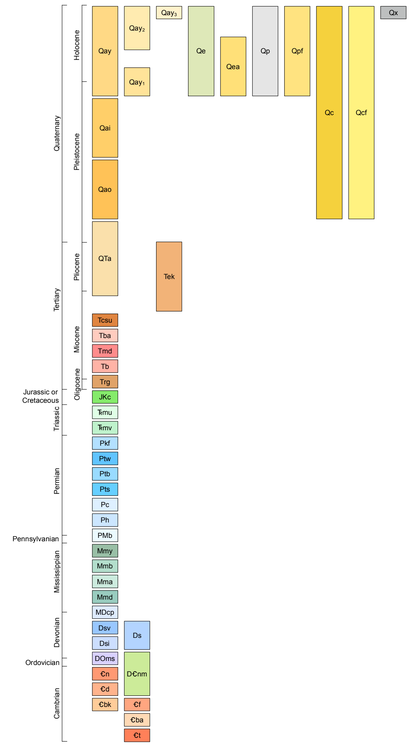
- **Ptw** — Woods Ranch Member
- **Ptb** — Brady Canyon Member
- **Pts** — Seligman Member
- **Pc** — **Coconino Sandstone (Permian)**
- **Ph** — **Hermit Formation (Permian)**
- **PMb** — **Bird Spring Formation (Early Permian to Late Mississippian)**

Monte Cristo Group (Late to Early Mississippian)

- **Mmy** — Yellowpine Limestone
- **Mmb** — Bullion Limestone
- **Mma** — Anchor Limestone
- **Mmd** — Dawn Limestone
- **MDcp** — **Crystal Pass Limestone (Early Mississippian to Late Devonian)**

Sultan Limestone (Middle and Early Devonian)

- **Ds** — Sultan Limestone, undivided on Sheep Mountain
- **Dsv** — Valentine Member
- **Dsi** — Ironside Member
- **DCnm** — **Mountain Springs Formation, Nopah Formation, and Dunderberg Shale, undivided (Middle Devonian; Ordovician; and Furongian, formerly Late Cambrian). Sheep Mountain.**
- **DOms** — **Mountain Springs Formation (Middle Devonian, Late Ordovician, and Early Ordovician)**
- **Ꞓn** — **Nopah Formation (Furongian, formerly Late Cambrian)**
- **Ꞓd** — **Dunderberg Shale (Furongian, formerly Late Cambrian)**
- **Cf** — **Frenchman Mountain Dolomite (Cambrian Series 3, formerly Middle Cambrian) Sheep Mountain**
- **Ꞓbk** — **Bonanza King Formation (Furongian and Cambrian Series 3, formerly Late and Middle Cambrian)**
- **Ꞓba** — **Bright Angel Shale (Cambrian Series 2 and 3, formerly Early (in part) and Middle Cambrian)**
- **Ct** — **Tapeats Sandstone (Cambrian Series 2, formerly Early Cambrian)**



Symbology (per FGDC-STD-013-2006)

Contact Solid where certain and location accurate, long-dashed where approximate; queried if identity or existence uncertain.

Internal contact Solid where certain and location accurate.

Fault Solid where certain and location accurate, long-dashed where approximate, short dash where inferred, dotted where concealed; queried if identity or existence uncertain. Ball on downthrown side, locally showing dip and lineation bearing.

Low-angle normal fault Solid where certain and location accurate, dotted where concealed.

Thrust fault Solid where certain and location accurate, long-dashed where approximate, dotted where concealed. Sawteeth on upper plate.

Thrust fault Solid where certain and location accurate. Sawteeth on upper plate. Has later low-angle normal movement.

Anticline Solid where certain and location accurate, long-dashed where approximate, dotted where concealed.

Syncline Solid where certain and location accurate, long-dashed where approximate.

Overturned anticline Solid where certain and location accurate.

Strike and dip of bedding

41 Inclined — 52 Approximate — Vertical — Overturned — Horizontal

Strike and dip of compaction foliation in ash-flow tuff

47 Inclined — Horizontal

Strike and dip of flow banding or flow foliation in volcanic rocks

32 Inclined

Strike and dip of joints

74 Inclined

Strike and dip of tectonic foliation

21 Inclined

Plunge direction of lineation

69

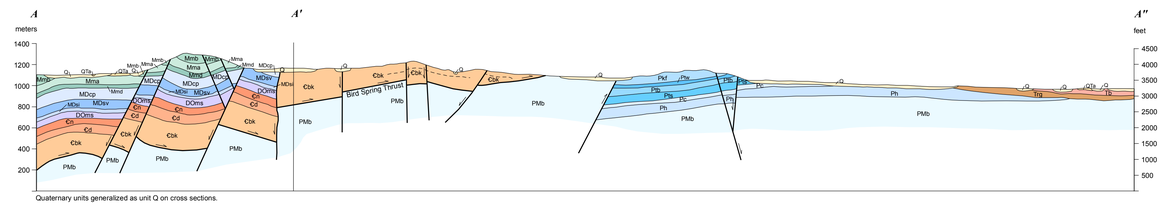
Line of cross section

A — A'

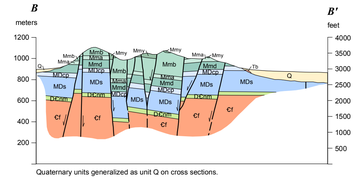
SOURCES OF GEOLOGIC DATA

1. Bedrock geology by B.C. Burchfiel, early 1980s. Digitized and simplified by L.J. Garside, 2008–2009.
2. Bedrock geology by B.C. Burchfiel, early 1980s, and L.J. Garside, 2008. Digitized and simplified by L.J. Garside, 2008.
3. Bedrock geology by L.J. Garside, 2008–2009.
4. Bedrock geology by S.M. Rowland, 1981. Digitized and simplified by L.J. Garside, 2008.
5. Surficial geology by P.K. House and B.J. Buck, 2002–2006. Also includes surficial outcrops in areas of bedrock (1–4 above).

See accompanying text for full unit descriptions and references for this map.



Quaternary units generalized as unit Q on cross sections.



Quaternary units generalized as unit Q on cross sections.

Suggested citation:
Garside, L.J., House, P.K., Burchfiel, B.C., Rowland, S.M., and Buck, B.J., 2012, Geologic map of the Jean quadrangle, Clark County, Nevada: Nevada Bureau of Mines and Geology Map 176, scale 1:24,000, 11 p.

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
Supplementary Contour Interval 20 Feet

Projection: Universal Transverse Mercator, Zone 11, North American Datum 1927 (m)

Base map: U.S. Geological Survey Jean 7.5' quadrangle (provisional edition 1989)

Adjoining 7.5' quadrangle names

1	2	3
4	5	6
7	8	9

1 Cottonwood Pass
2 Bird Spring
3 Sloan
4 Goodsprings
5 Jean
6 Hidden Valley
7 State Line Pass
8 Roach
9 McCullough Pass

GN — MN
0° 59' — 13° 30'

UTM GRID AND 1989 MAGNETIC NORTH

Nevada Bureau of Mines and Geology
Mackay School of Earth Sciences and Engineering
College of Science
University of Nevada, Reno

Field work done in early 1980s, 2002–2009
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PEER-REVIEWED MAP
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Field review by James E. Faulds and George Varhalmi

Edited by Daphne D. LaPointe and Charlotte Stock
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