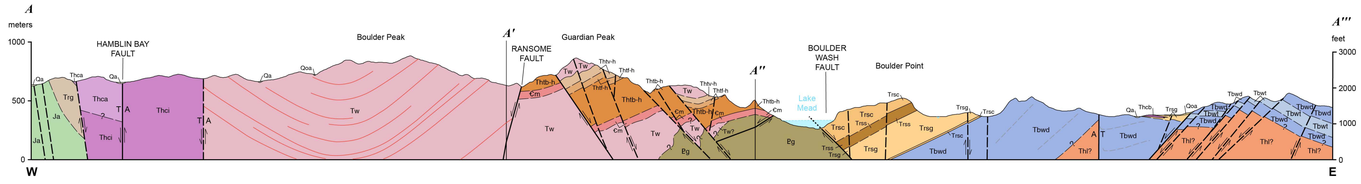
Partially funded by the USGS National Cooperative Geologic Mapping Program under STATEMAP award number G20AC00390.



GEOLOGIC MAP OF THE SOUTH HALF OF THE BOULDER CANYON QUADRANGLE, CLARK COUNTY, NEVADA

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2022

QUATERNARY DEPOSITS

- Qa — **Alluvium (Holocene)**
- Qc — **Colluvium (Holocene)**
- Qoa — **Older alluvium (early Holocene to Pleistocene)**

TERTIARY SEDIMENTARY ROCKS

Red sandstone unit (late Miocene)

- Trsc — **Conglomerate lithofacies**
- Trss — **Sandstone lithofacies**
- Trsg — **Gypsum lithofacies**
- Trsl — **Landslide blocks and breccia**
- Thl — **Horse Spring Formation, Lovell Wash Member (middle Miocene)**
- Trg — **Rainbow Gardens formation (early Miocene to late Oligocene)**

MESOZOIC SEDIMENTARY ROCKS

- Ja — **Aztec Sandstone (Early Jurassic)**

Chinle Formation (Late Triassic)

- TRcu — **Upper part**
- TRcs — **Shinarump Member**
- TRm — **Moenkopi Formation (Early Triassic)**
- Ꞓm — **Muav Limestone (Cambrian)**

TERTIARY VOLCANIC AND INTRUSIVE ROCKS

Hamblin-Cleopatra volcano (late to middle Miocene)

- Thcb — **Basaltic lavas**
- Thca — **Andesitic lavas**
- Thci — **Hypabyssal rocks**

Volcanic units of Boulder Wash (middle Miocene)

- Tbwt — **Dacitic tuffs and breccias**
- Tbwd — **Dacitic lavas and tuffs**

Wilson Ridge pluton (middle Miocene)

- Twa — **Hydrothermally altered quartz monzonite**
- Tw — **Hypabyssal quartz monzonite**

METAMORPHIC ROCKS

Hornfelsed screens of Horse Spring Formation within Wilson Ridge pluton (middle Miocene)

- Thtv-h — **Thumb Member(?), mafic lavas**
- Thtf-h — **Thumb Member, sandstone, shale, and tuff**
- Thtb-h — **Thumb Member, granite- and gneiss-clast breccia and conglomerate**
- Ꝑg — **Orthogneiss (Proterozoic)**

Contact Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or location uncertain.

Fault Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or existence uncertain.

Normal fault Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or existence uncertain. Showing dip; ball on downthrown side. *In cross section arrows show relative motion.*

Oblique-slip fault Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or existence uncertain. Arrows show relative motion, ball on downthrown side. *In cross sections, A—away from observer, T—toward observer.*

Strike-slip fault Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or existence uncertain. Arrows show relative motion.

Anticline Dashed where approximately located.

Syncline Dashed where approximately located; queried where location or identity uncertain

Lake Mead shoreline Approximately located from 2017 NAIP imagery.

Dike Solid where certain and location accurate, dashed where approximately located. Showing dip.

Strike and dip of bedding

- 41 — Inclined
- 58 — Inclined, approximately located
- 28 — Overturned
- 37 — Inclined, in crossbedding

Strike and dip of metamorphic foliation

- 67 — Inclined

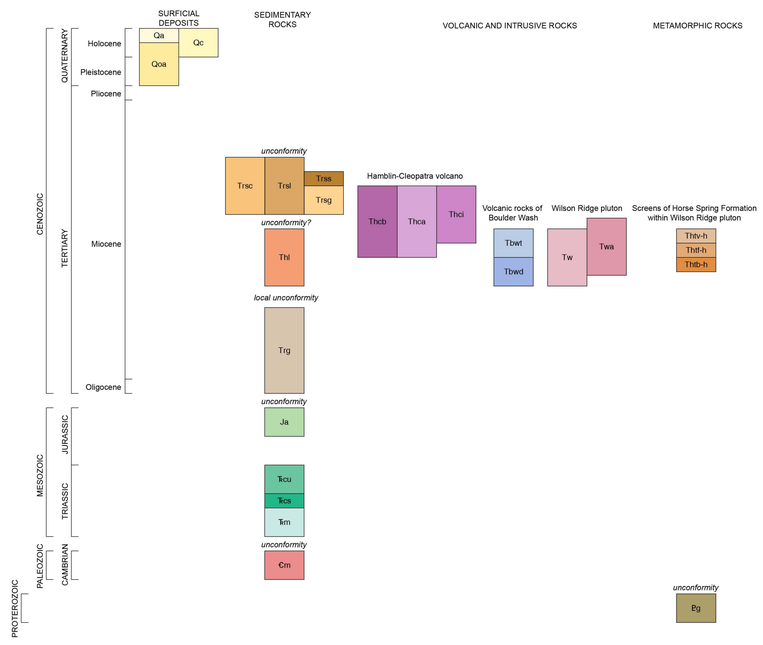
Strike and dip of igneous flow foliation

- 59 — Inclined

Strike and dip of unmapped intrusive contact, mainly marks trend of unmapped dikes

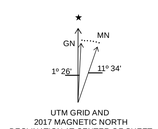
- 42 — Inclined

A — A'''
Line of cross section



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

Suggested citation:
Darin, M.H., and Demircan, B., 2022, Geologic map of the south half of the Boulder Canyon quadrangle, Clark County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 2022-01, scale 1:24,000, 5 p.



UTM GRID AND
2017 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

Adjoining 7.5' quadrangle names

1	2	3
4	5	6
7	8	9

1 Muddy Peak
2 Bitter Spring
3 Echo Bay
4 Callville Bay
5 Boulder Canyon
6 Middle Point
7 Hoover Dam
8 Petroglyph Wash
9 Bonelli Bay

Scale 1:24,000

0 — 0.5 — 1 kilometer
0 — 0.5 — 1 mile
0 — 1000 — 2000 — 3000 — 4000 — 5000 feet

CONTOUR INTERVAL 80 FEET

Projection: Universal Transverse Mercator, Zone 11, North American Datum 1983 (m)

Base map: U.S. Geological Survey Boulder Canyon 7.5' quadrangle (2018)

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

Field work done in 2021
This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program under STATEMAP award number G20AC00390. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

OPEN-FILE REPORT
Has not undergone peer review

Compilation by Michael H. Darin
Cartography and map production in ESRI ArcGIS v10.7 (GeMS) by Irene M. Edgerton
Cartographic and style review by Jennifer Vican
First Edition, May, 2022
Symbology per FGDC-STD-013-2006
Published by Nevada Bureau of Mines and Geology
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2717