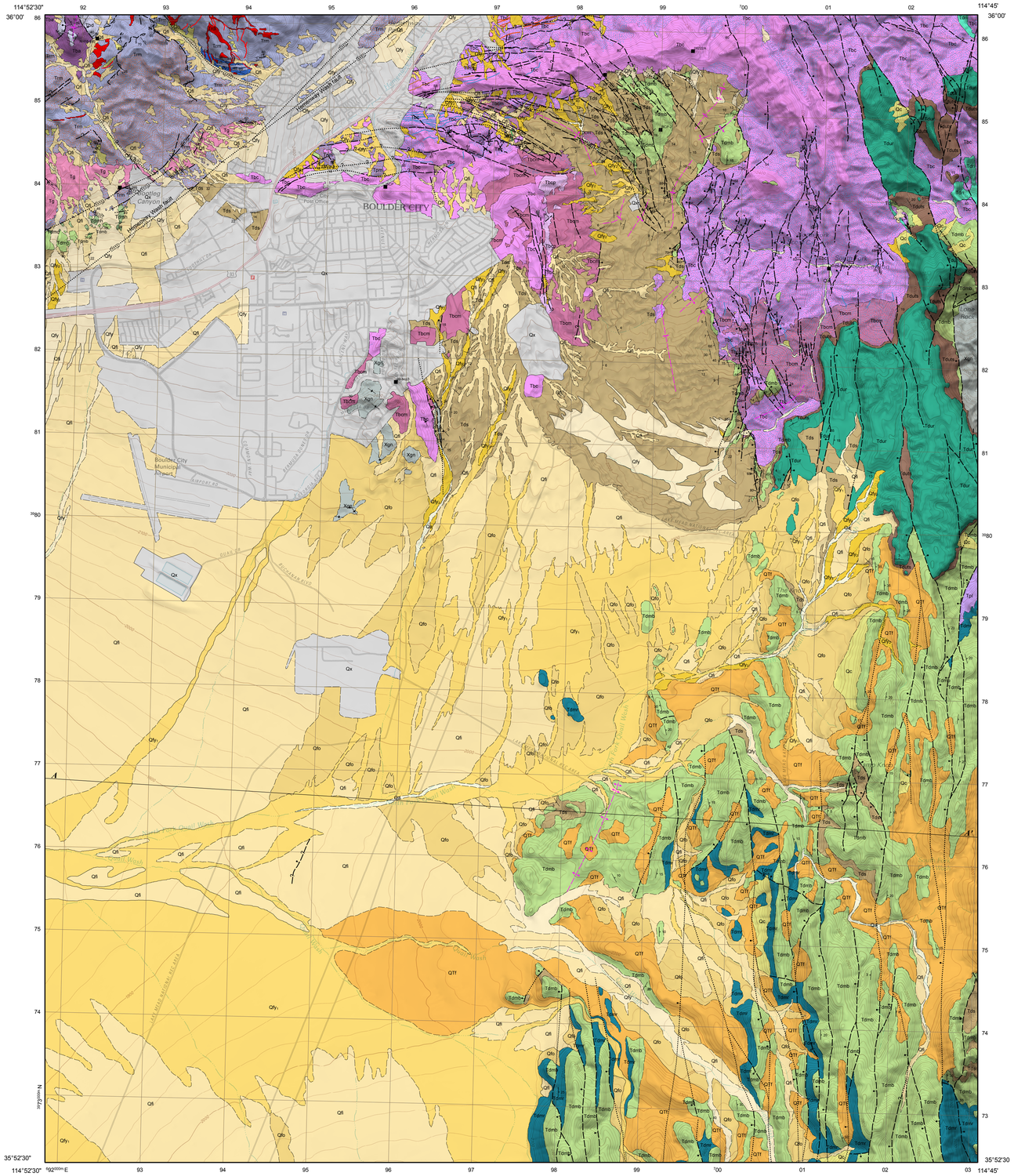
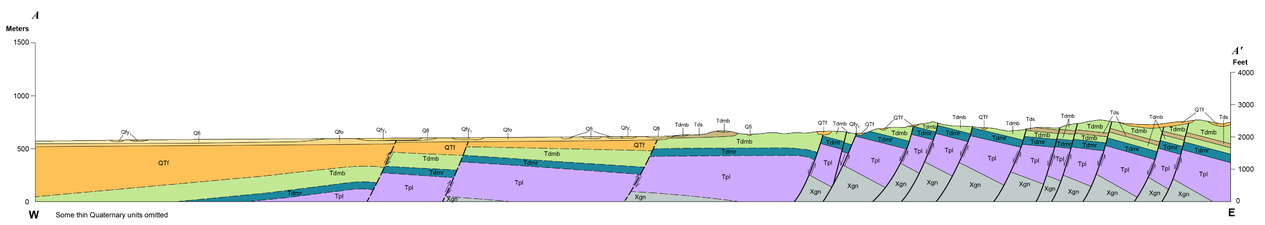
This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program under STATEMAP award number G15AC00240, 2016.

PRELIMINARY GEOLOGIC MAP OF THE BOULDER CITY QUADRANGLE, CLARK COUNTY, NEVADA

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2016





ANTHROPOGENIC FEATURES AND DEPOSITS

- Qx — Anthropogenic modifications (Anthropocene to Holocene)

QUATERNARY DEPOSITS

- Qc — Colluvium (Holocene)
- Qa — Young alluvium (Historic to late Holocene)
- Qfy — Young alluvial-fan deposits, undivided (late Holocene to late Pleistocene)
  - Qfy_1 — Youngest alluvial-fan deposits (late to middle Holocene)
  - Qfy_2 — Young alluvial-fan deposits (early Holocene to late Pleistocene)
- Qfi — Intermediate-aged alluvial-fan deposits (late to middle Pleistocene)
- Qfo — Older alluvial-fan deposits (middle to early Pleistocene)
- QTf — Early Pleistocene to late Pliocene alluvial-fan deposits (early Pleistocene to late Pliocene)

TERTIARY VOLCANIC AND SEDIMENTARY ROCKS

Mount Davis volcanics (middle Miocene)

- Tdur — Upper rhyolite and dacite lavas of Mount Davis (middle Miocene)
- Tduls — Upper sediments of Mount Davis (middle Miocene)
- Tdmb — Middle basalt lavas of Mount Davis (middle Miocene)
- Tdmd — Middle dacite and rhyolite lavas of Mount Davis(?) (middle Miocene)
- Tdmh — Middle hornblende dacite lavas of Mount Davis(?) (middle Miocene)
- Tdmr — Middle dacite and andesite lavas of Mount Davis (middle Miocene)
- Tds — Undivided sediments of Mount Davis (middle Miocene)

Bootleg Wash volcanics (middle Miocene)

- Tbd — Bootleg Wash dacite and rhyolite (middle Miocene)
- Tba — Bootleg Wash andesite (middle Miocene)

Red Mountain volcanics (middle Miocene)

- Trm — Red Mountain volcanics (middle Miocene)

Patsy Mine volcanics (middle to early Miocene)

- Tpm — Middle Patsy Mine volcanics (middle Miocene)
- Tpl — Lower Patsy Mine volcanics (early Miocene)

TERTIARY INTRUSIVE ROCKS

- Tdri — Rhyolite and dacite intrusions, correlative with Tdur (middle Miocene)
- Tdmbi — Basalt dike, correlative with Tdmb (middle Miocene)
- Tdri — Rhyolite and dacite dikes (middle Miocene)
- Tdi — Dacite and rhyolite dikes (middle Miocene)
- Tpai — Porphyritic andesite dikes (middle Miocene)
- Tgi — Granite dikes (middle Miocene)

TERTIARY PLUTONIC ROCKS

Boulder City pluton (middle Miocene)

- Tbcp — Boulder City pluton, porphyritic younger phase (middle Miocene)
- Tbc — Boulder City pluton, main phases (middle Miocene)
- Tbcm — Boulder City pluton, older mafic phases (middle Miocene)
- Tg — Granite stock of the River Mountains (middle Miocene)

PALEOZOIC SEDIMENTARY ROCKS

- Psu — Undivided sedimentary rocks (Paleozoic)

PALEOPROTEROZOIC METAMORPHIC ROCKS

- Xgn — Gneiss (Paleoproterozoic)

Contact Solid where certain, dashed where approximate; queried if identity or existence uncertain.

Normal fault Dashed where approximate, dotted where concealed; queried if identity or existence uncertain. Ball on downthrown side. Arrows show oblique motion. Locally showing dip. Cross tick on vertical faults. *In cross section arrows show relative motion.*

Strike-slip fault Dashed where approximate, dotted where concealed; queried if identity or existence uncertain. Arrows show relative motion.

Low-angle normal fault Dashed where approximate, dotted where concealed. Locally showing dip. Half circles on upper plate. Arrows show oblique motion.

Syncline Dashed where approximate, dotted where concealed.

Anticline Dashed where approximate, dotted where concealed.

Dike Approximately located. Locally showing dip. Cross tick shows vertical dike dip.

Alteration

Hydrothermal — Groundwater oxidation

Strike and dip of bedding

Inclined — Overturned

Strike and dip of foliation in metamorphic rocks

Inclined — Vertical

Strike and dip of primary foliation in igneous rocks

Inclined

Geochronological sample location (see Table 1)

Line of cross section

Table 1.

Sample	Latitude NAD 83	Longitude NAD 83	Analysis	Age (Ma)	±2 sigma	Source
BCP-2	35.98753	-114.79255	$^{40}Ar/^{39}Ar$	13.27	0.03	Felger et al., 2014
08222A	35.996086	-114.788204	U-Pb	13.96	0.25	Felger et al., 2014
BCP	35.9813	-114.8294	U-Pb	12.48	0.48	Honn, 2012
NH16-886	35.97241	-114.76996	U-Pb	14.45	0.09	this study
16-bcp2	35.993488	-114.800089	U-Pb	13.5	0.21	this study
09-bcp3	35.960058	-114.827521	U-Pb	13.99	0.28	this study
NH16-299	35.98119848	-114.8650114	U-Pb	13.65	0.20	this study
NH16-893	35.997408	-114.868405	U-Pb	13.42	0.26	this study

Reference list in accompanying text document.

Suggested citation:
Dee, S., Hinz, N.H., Anderson, R.E., and Johnsen, R. 2016, Preliminary geologic map of the Boulder City quadrangle, Clark County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 16-4, 1:24,000 scale, 6 p.

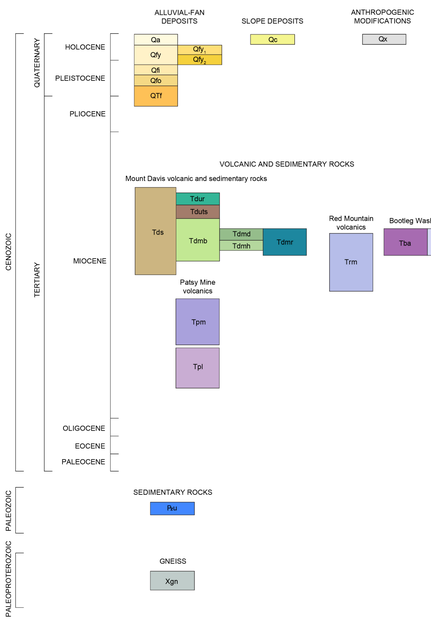
See accompanying text for full unit descriptions and references for this map.

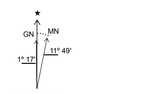
Adjoining 7.5' quadrangle names

1	2	3
4	5	6
7	8	9

1 Henderson
2 Boulder Beach
3 Hoover Dam
4 Boulder City NW
5 Boulder City
6 Ringbolt Rapids
7 Boulder City SW
8 Boulder City SE
9 Willow Beach







Scale 1:24,000

0 0.5 1 kilometer

0 0.5 1 mile

0 1000 2000 3000 4000 5000 feet

CONTOUR INTERVAL 20 FEET

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

Base map: U.S. Geological Survey Boulder City 7.5' quadrangle (2015)

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

Field work conducted in 2016
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DRAFT
Preliminary geologic map
Has not undergone office, field review, or full editing
Will be revised before publication

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