GEOLOGIC MAP OF THE ELGIN NE QUADRANGLE, LINCOLN COUNTY, NEVADA

Peter D. Rowley[1], Lawrence W. Snee[2], Ralph R. Shroba[3], F. William Simonds[4], and R. Ernest Anderson[5]

[1] Geologic Mapping, Inc., New Harmony, UT, 84757
[2] Global Gems & Geology, Golden, CO 80401
[3] Consulting Geologist, Boulder, CO 80301
[4] Consulting Geologist, Brightwood, OR 97011
[5] Deceased

2025

GEOLOGIC UNITS

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

QUATERNARY DEPOSITS

- Qac — Alluvium and colluvium, undivided (Holocene and late Pleistocene)
- Qam — Main-stream floodplain alluvium (Holocene and latest Pleistocene?)
- Qfm — Fan alluvium of Meadow Valley (Holocene and latest Pleistocene?)
- Qc — Colluvium (Holocene and late Pleistocene)
- Qt — Talus and minor hillslope colluvium (Holocene and late Pleistocene)
- Ql — Landslide deposits (Holocene and late Pleistocene)
- Qta — Terrace alluvium (late Pleistocene)
- QTt — Old talus (early Pleistocene, Pliocene, or late Miocene)
- QTfc — Fan alluvium of Chief Mountain (early Pleistocene or late Pliocene)

TERTIARY ROCKS

- Tb — Basalt (Miocene)
- Tn — Sedimentary rocks of Newman Canyon (Miocene)

Rhyolite of Elgin (Miocene)

- Tref — Lava flows
- Tret — Tuff

Aphyric rhyolite of Pennsylvania Canyon (Miocene)

- Tapf — Lava Flows
- Tapt — Tuff
- Tdr — Rhyolite dikes (Miocene)
- To — Ox Valley Tuff (Miocene)
- Tkc — Tuff of Kershaw Canyon (Miocene)

Gregerson Basin Member of the Kane Wash Tuff (Miocene)

- Tkgu — Upper unit
- Tkgl — Lower unit
- Tsc — Tuff of Sawmill Canyon (Miocene)
- Trm — Rhyolite lava flows of Meadow Valley Wash (Miocene)
- Tdru — Rhyolite dikes of Union Pacific Railroad (Miocene)

Tuff of Rainbow Canyon (Miocene)

- Trci — Intracaldera
- Trc — Outflow
- Tcc — Tuffaceous sediments of Chokecherry Canyon (Miocene)
- Tnc — Tuff of Narrow Canyon (Miocene)
- Tbs — Rhyolite of Bishop Spring (Miocene)
- Tpm — Porphyry of Meadow Valley Wash (Miocene)

Tuff of Acklin Canyon (Miocene)

- Taci — Intracaldera tuff
- Tac — Outflow tuff

Rhyolite of Rock Springs Canyon (Miocene)

- Trrv — Vent
- Trro — Outflow tuff

Hiko Tuff (Miocene)

- Thi — Intracaldera deposits
- Thm — Intracaldera megabreccia deposits
- Tra — Rhyolite of Applewhite Spring (Miocene)
- Tvb — Volcanic rocks of Boyd (Miocene)
- Ts — Sedimentary rocks (Eocene or Paleocene)

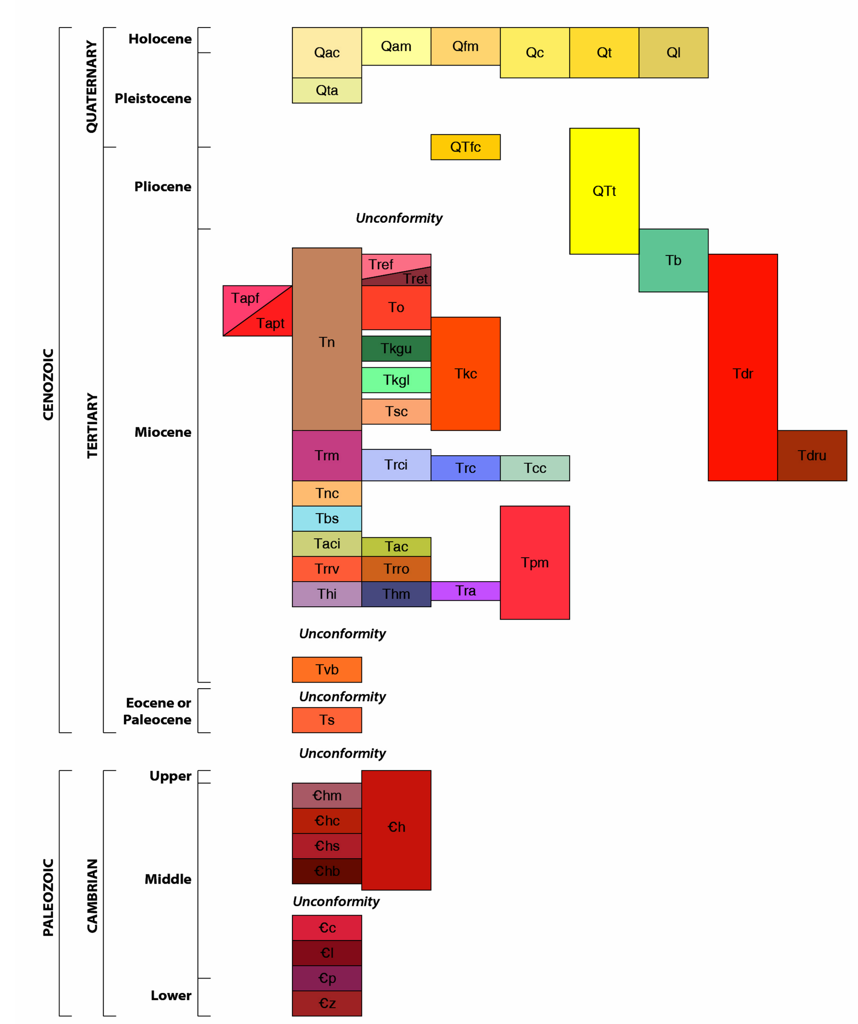
PALEOZOIC SEDIMENTARY ROCKS

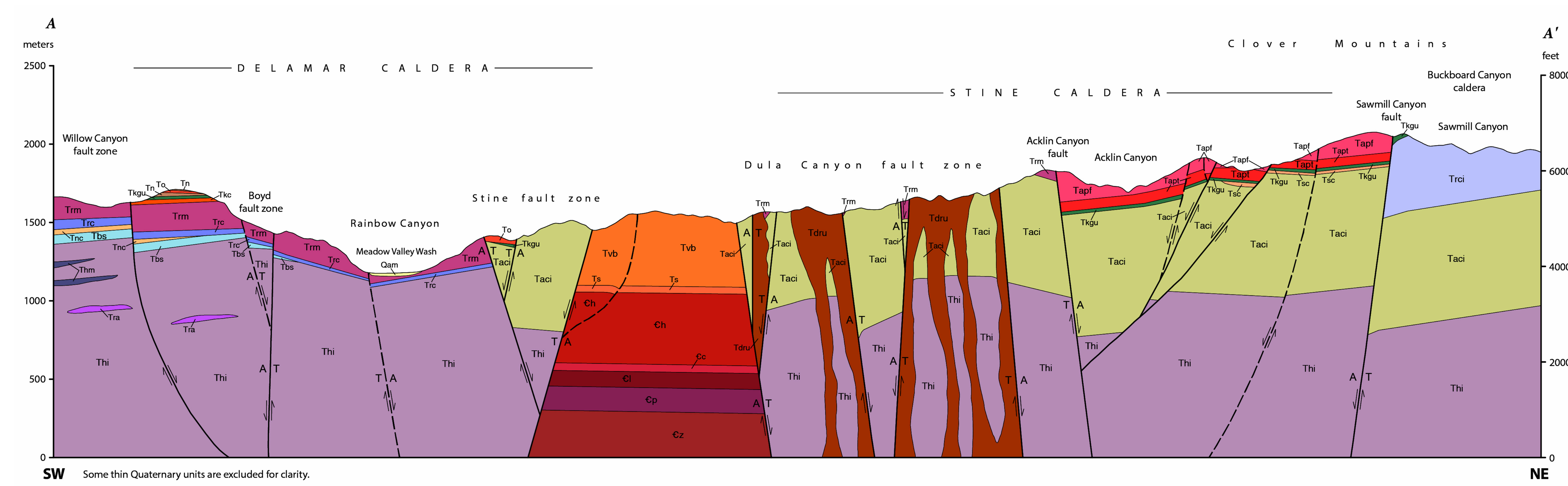
- Ꞓh — Highland Peak Formation (Upper and Middle Cambrian) (cross section only)
  - Ꞓhm — Meadow Valley Member (Middle Cambrian)
  - Ꞓhc — Condor Member (Middle Cambrian)
  - Ꞓhs — Step Ridge Member (Middle Cambrian)
  - Ꞓhb — Burrows Member (Middle Cambrian)
- Ꞓc — Chisholm Shale (Middle Cambrian)
- Ꞓl — Lyndon Limestone (Middle Cambrian)
- Ꞓp — Pioche Shale (Middle and Lower Cambrian)
- Ꞓz — Zabriskie Quartzite (Lower Cambrian)

MAP SYMBOLS

- **Contact** Solid where certain.
- **Fault** Solid where certain and location accurate, dashed where approximately located, dotted where concealed.
- **Normal fault** Solid where certain and location accurate, dashed where approximately located, dotted where concealed. Showing dip value and direction, inclined slickenline showing plunge, ball on downthrown side. *In cross section, arrows show relative motion.*
- **Strike-slip fault** Solid where certain and location accurate, dashed where approximately located, dotted where concealed. Showing dip value and direction, inclined slickenline showing plunge, arrows show relative motion. *In cross section, A—away from observer, T—toward observer.*
- **Oblique-slip fault** Solid where certain and location accurate, dashed where approximately located, dotted where concealed. Showing dip value and direction, inclined slickenline showing plunge, arrows show relative motion, ball on downthrown side. *In cross sections, A—away from observer, T—toward observer, arrows show relative motion.*
- **Gravity slide plane** Solid where certain and location accurate, dotted where concealed. Barbs on the upper gravity slide block, in the direction of failure, showing dip of the slide plane.
- **Caldera margin** Solid where certain and location accurate. Hachures on downthrown side.
- **Breccia** Pattern where fault is a wide zone of breccia.
- **Anticline** Dashed where approximately located.
- A — A' **Line of cross section**
- **Strike and dip of bedding**
  - 41 Inclined
  - 70 Overturned
- **Strike and dip of flow foliation in volcanic rocks**
  - 59 Inclined
- 92-705a **Geochemistry sample** Label shows sample number. See Table 1 in accompanying text.
- **Geochronology sample** Label shows sample number. See Table 2 in accompanying text.
  - 93-679 $^{40}Ar/^{39}Ar$

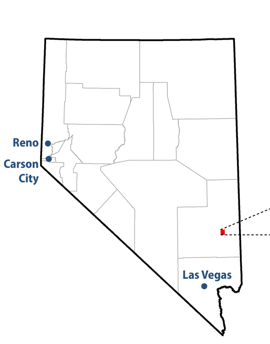
CORRELATION OF GEOLOGIC UNITS

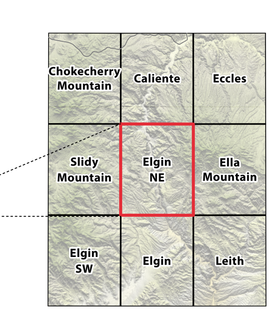


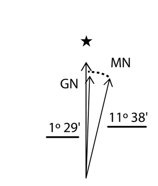


Some thin Quaternary units are excluded for clarity.

Suggested citation:
Rowley, P.D., Snee, L.W., Shroba, R.R., Simonds, F.W., and Anderson, R.E., 2025, Geologic Map of the Elgin NE quadrangle, Lincoln County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 2025-05, scale 1:24,000, 41 p.







UTM GRID AND
2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

Scale 1:24,000

CONTOUR INTERVAL 40 FEET

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

Base map: U.S. Geological Survey Elgin NE 7.5' quadrangle (2021)

Hillshade: Derived from QL2 lidar data from The National Map.

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

Field work completed in 1992–1993.
This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program under STATEMAP award number G22AC00578. 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

Cartographic and style review by Jennifer Vlcan
Compilation by Peter D. Rowley
Cartography and map production in ESRI ArcPro by Ryan G. Smith and Andrew S. Hauck
First Edition December 2025
Symbology per FGDC-STD-013-2006
Data model per Geologic Map Schema (GeMS)
Published by Nevada Bureau of Mines and Geology
© Copyright 2025 The University of Nevada, Reno. All Rights Reserved.

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

For sale by:
Nevada Bureau of Mines and Geology
2175 Raggio Pkwy.
Reno, Nevada 89512
ph. (775) 682-8766
www.nbmg.unr.edu; nbmg@unr.edu

2798