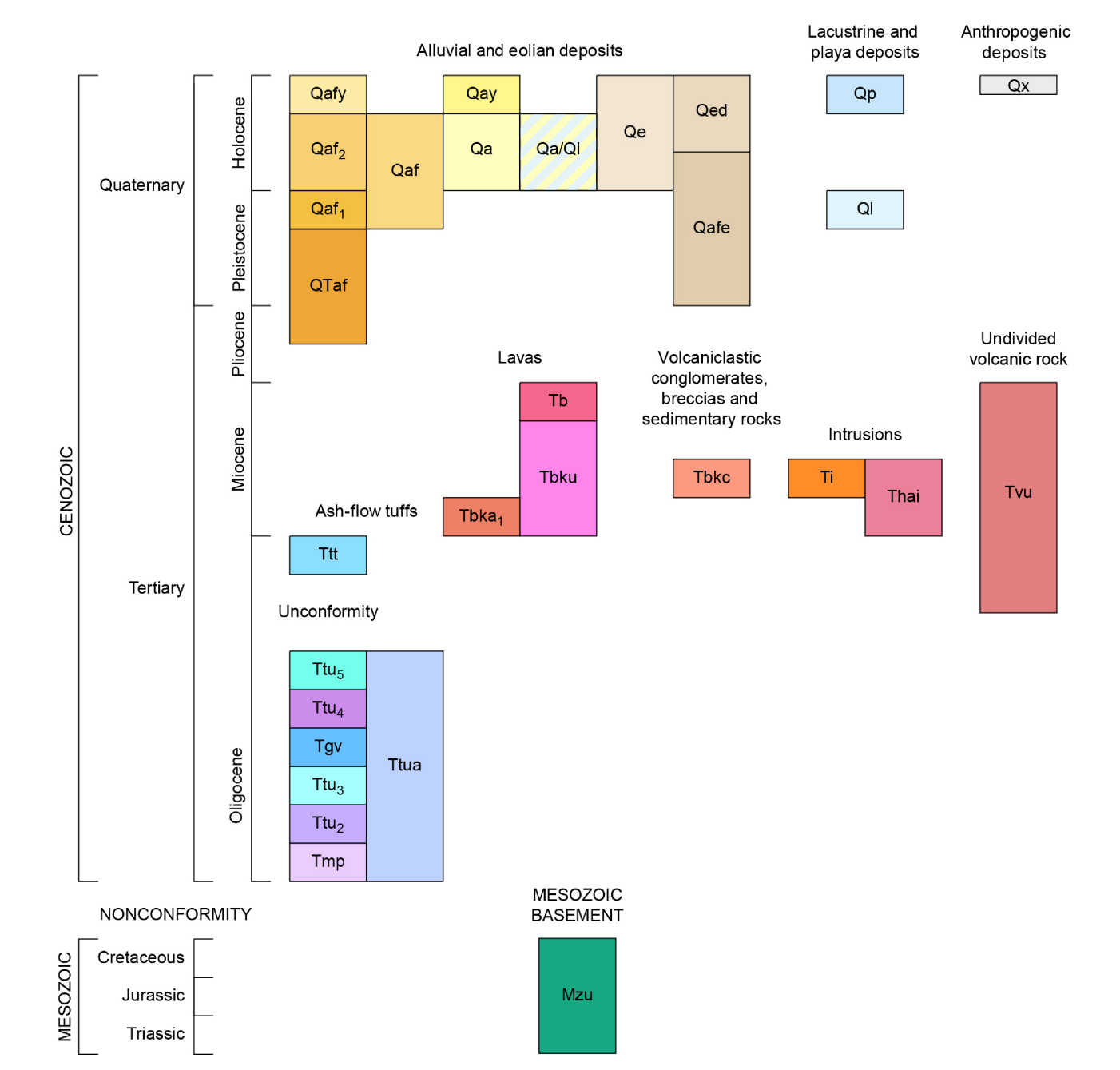


PRELIMINARY GEOLOGIC MAP OF THE RED RIDGE AREA, CHURCHILL AND MINERAL COUNTIES, NEVADA

Chad W. Carlson
Nevada Bureau of Mines and Geology, University of Nevada, Reno
2017

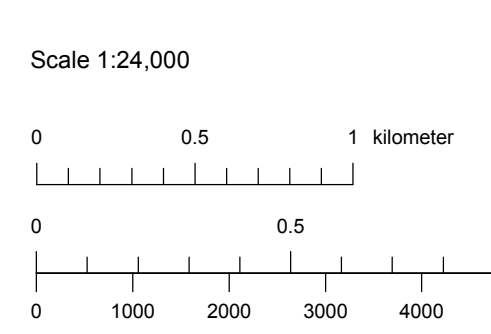
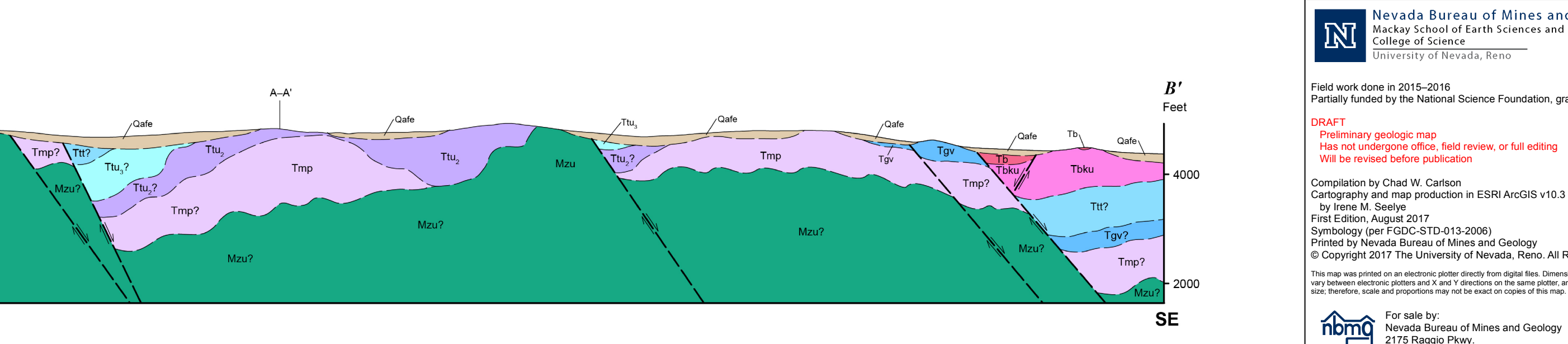
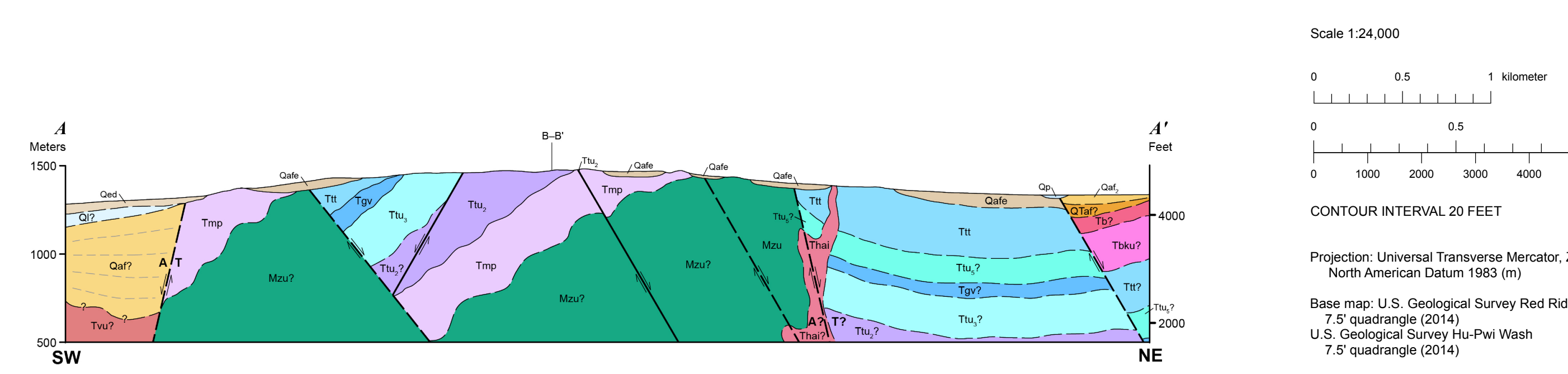
- QUATERNARY DEPOSITS**
- Anthropogenic deposits**
- Ox Anthropogenic deposits and altered surfaces (Holocene)
- Eolian deposits**
- Qe Eolian sand deposits (Holocene)
 - Qed Sand dunes (Holocene)
 - Qafe Alluvial-fans with veneer of sands and silts (Holocene to early Pleistocene)
- Alluvial deposits**
- Qay Active alluvial channel and transported sediments (Holocene)
 - Qa Alluvium (Holocene)
 - QaCl Alluvium deposits over late Pleistocene lacustrine deposits (Holocene)
- Lacustrine and playa deposits**
- Qp Ephemeral playa deposits (Holocene)
 - Ql Lacustrine deposits (late Pleistocene)
- Alluvial-fan deposits**
- Qaf Active alluvial-fan deposits (Holocene)
 - Qaf₂ Alluvial-fan deposits (Holocene)
 - Qaf₁ Alluvial-fan deposits (late Pleistocene)
 - Qaf Alluvial-fan deposits, undivided (Holocene to late Pleistocene)
 - QTaf Alluvial-fan deposits (middle Pleistocene to Pliocene)
- TERTIARY ROCKS**
- Oligocene-Miocene volcanics and sedimentary deposits**
- Tb Basaltic lavas (late Miocene)
 - Tbk Brown Knob formation, undivided (middle to early Miocene)
 - Tbkc Volcaniclastic conglomerates, breccias, and intercalated sedimentary rocks of Brown Knob formation (early Miocene)
 - Tbka Oldest basaltic andesite lavas of the Brown Knob formation (early Miocene)
 - Tbu Volcanic rocks, undivided (late Miocene to late Oligocene)
- Tertiary intrusions**
- Thai Hornblende andesite intrusion (early Miocene)
 - Ti Plagioclase-hornblende intrusions, dikes, and sills (early Miocene)
- Oligocene ash-flow tuffs**
- Tt Tuff of Toiyabe (late Oligocene - 23.29±0.02 Ma)
 - Tt₅ Unknown tuff 5 (late Oligocene)
 - Tt₄ Unknown tuff 4 (late Oligocene)
 - Tgv Tuff of Gabbs Valley (late Oligocene - 24.95±0.02 Ma)
 - Tt₃ Unknown tuff 3 (late Oligocene)
 - Tt₂ Unknown tuff 2 (late Oligocene)
 - Tmp Mickey Pass Tuff (late Oligocene - 27.1-27.4 Ma)
 - Ttua Undivided tuff, altered (late Oligocene)
- PRE-TERTIARY ROCKS**
- Mzu Mesozoic basement granitic and metamorphic rocks, undivided (Mesozoic)



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

Suggested citation:
Carlson, C.W., 2017, Preliminary geologic map of the Red Ridge area, Churchill and Mineral counties, Nevada: Nevada Bureau of Mines and Geology Open-File Report 17-2, scale 1:24,000, 7 p.

- Contact** Dashed where approximately located, dotted where concealed.
- Normal fault** Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if existence uncertain. Ball on downthrown side.
- 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.
- Lake Lahontan highstand shoreline** Solid where certain and location accurate.
- Strike and dip of bedding**
- 41° Inclined ⊕ Horizontal
- Strike and dip of compaction foliation in ash-flow tuff**
- 47° Inclined
- Strike and dip of flow banding or flow foliation in volcanic rocks**
- 59° Inclined
- A—A'**
Line of cross section
- Adjoining 7.5' quadrangle names**
- | | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |
- Allen Springs
 - Diamond Field Jack Wash
 - Fourmile Canyon
 - Terrill Mountains
 - Red Ridge
 - Rawhide
 - Gillis Canyon NW
 - Hu-Pwi Wash
 - Pilot Cone
- UTM GRID AND 1983 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET**
- 0° 52' 13" 28"



CONTOUR INTERVAL 20 FEET
Projection: Universal Transverse Mercator, Zone 11, North American Datum 1983 (m)
Base map: U.S. Geological Survey Red Ridge 7.5' quadrangle (2014)
U.S. Geological Survey Hu-Pwi Wash 7.5' quadrangle (2014)

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

Field work done in 2015-2016
Partially funded by the National Science Foundation, grant #EAR1419724

DATA
has not undergone office, field review, or full editing
Will be revised before publication

Compilation by Chad W. Carlson
Cartography and map production in ESRI ArcGIS v10.3 (ArcGeology v1.3)
by Gene M. Sealey
First Edition, August 2017
Supersedes (per FGDC STD-13-2006)
Printed by Nevada Bureau of Mines and Geology
© Copyright 2017 The University of Nevada, Reno. All Rights Reserved.
This map was prepared on an electronic master from digital files. Original submission may vary between electronic, printed and X and Y deviations on the same plate, and paper may change with time. Please check coordinates and projections and do not expect copies of the map.

For sale by:
Nevada Bureau of Mines and Geology
2175 Raggio Drive
Reno, Nevada 89512
ph. (775) 682-6766
www.nbrmg.unr.edu; nbrmg@unr.edu