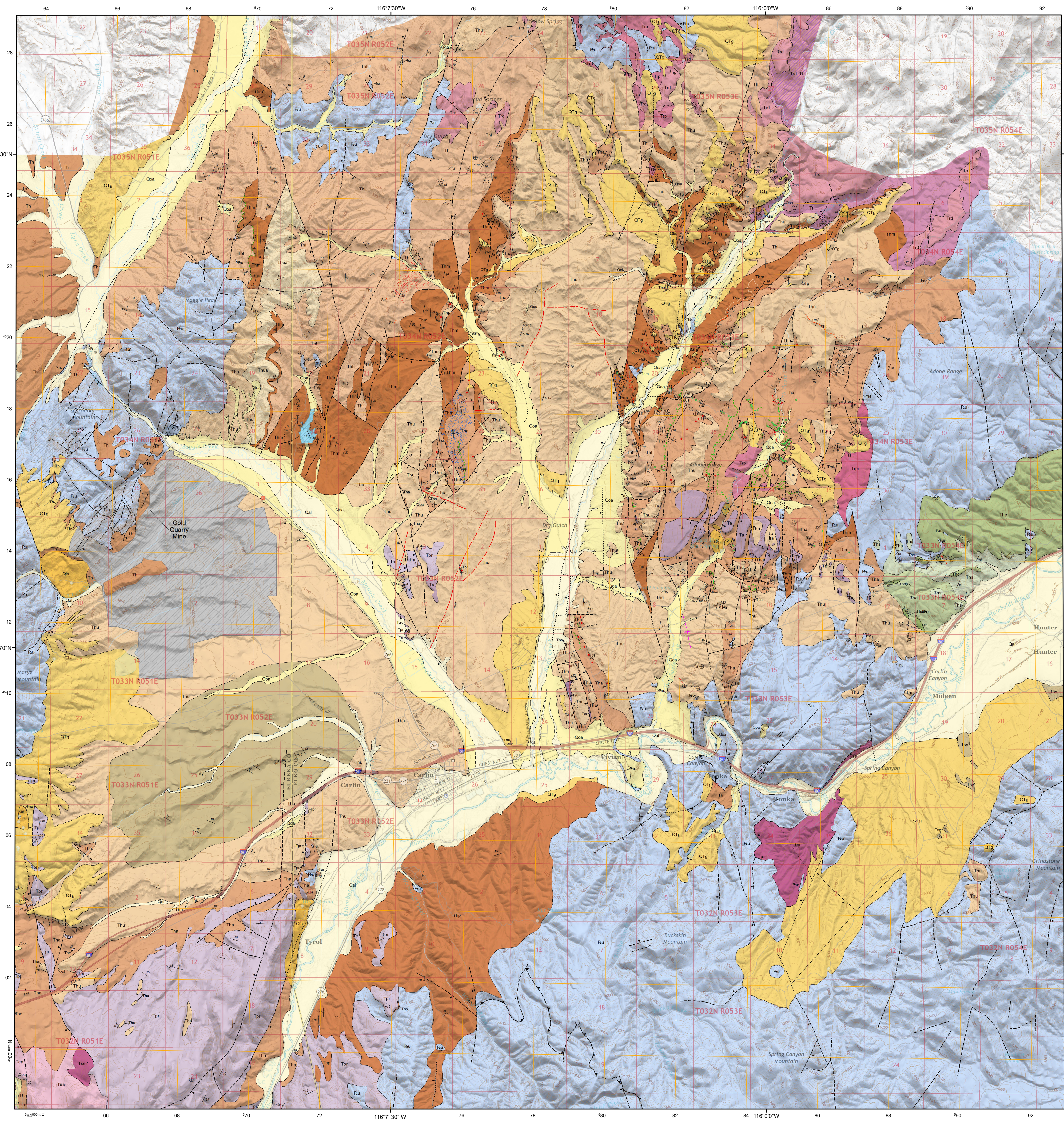
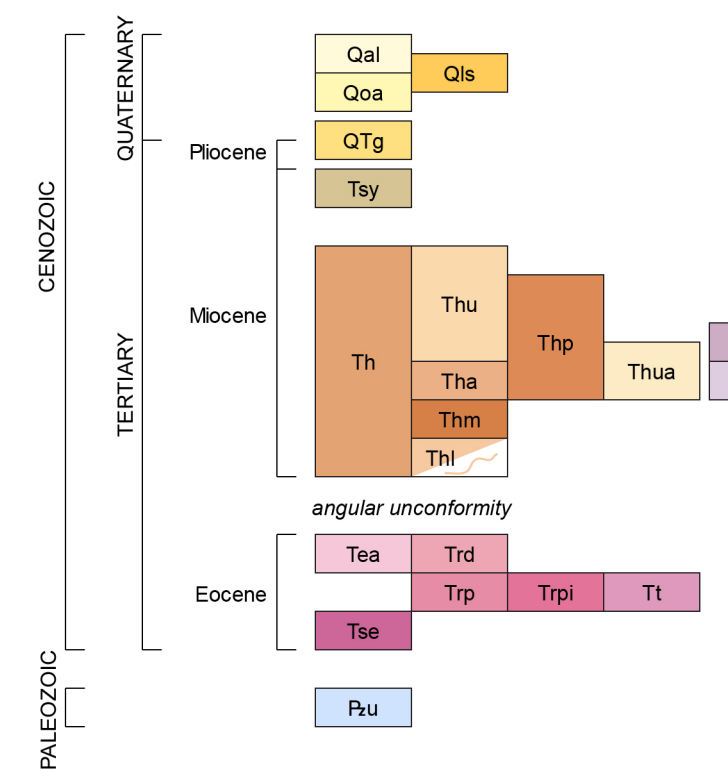




- Quaternary**
- Qal Alluvium (Quaternary)
 - Qls Landslide deposits (Quaternary)
 - Qoa Older alluvial deposits (Quaternary)
 - QTg Gravel deposits (Quaternary and Pliocene(?))
 - Tsy Younger sedimentary rocks (Miocene)
- Humboldt Formation (Miocene)**
- Th Humboldt Formation, undivided (Miocene)
 - Thu Upper epiclastic member (Miocene)
 - Thp Humboldt Formation, northern Piñon Range (Miocene)
 - Thua Ash-rich epiclastic member (Miocene)
 - Tha Ash-rich member (Miocene)
 - Thm Mixed epiclastic and ash-rich member (Miocene)
 - Thl Lower epiclastic member (Miocene)
- Humboldt Formation, southeast side of the Adobe Range**
- Thc Conglomerate (Miocene)
 - Ths Sandstone (Miocene)
 - Thd Debris flow and breccia (Miocene)
 - Thd (fs) Megablock within debris flow and breccia (Miocene)
- Andesite and rhyolite, undivided (Miocene)**
- Ta Andesite (Miocene)
 - Tpr Rhyolite of Paisaje Canyon (Miocene)
- Homblende andesite (Eocene)**
- Tea
- Rhyodacite (Eocene)**
- Ttd
- Tuff (Eocene)**
- Tt
- Rhyolite porphyry (Eocene)**
- Tip
- Intrusive rocks (Eocene)**
- Tpi
- Elko Formation (Eocene)**
- Tse



Contact Solid where certain and location accurate, long-dashed where approximately located, short-dashed where inferred, dotted where concealed.

Fault Long-dashed where approximately located, short-dashed where inferred, dotted where concealed, queried if identity or existence uncertain.

Normal fault Long-dashed where approximately located, short-dashed where inferred, dotted where concealed, queried if identity or existence uncertain. Ball on downthrown side.

Thrust fault Dashed where approximately located. Sawtooth on upper (tectonically higher) plate.

Syncline Dashed where approximately located.

Lineament Linear features visible on aerial imagery but not obvious on the ground.

Strike and dip of bedding

- Inclined
- Vertical
- Horizontal

Exposure of diatomite bed Beds likely are laterally continuous between exposures.

Paleocurrent direction from imbricated clasts

Road Artificial fill along I-80.

Reservoir

Area of silicified and bleached strata Massive chalcodendry and opaline silica are present in some tuffaceous and pebble conglomerate units in the upper Susie Creek area south of the Huntsman Ranch site and along upper Dry Gulch. Some silicified zones retain relict textures from the host sedimentary units, and gradational lateral contacts with unsilicified host rocks indicate replacement processes. In the Susie Creek area, thin, multi-layer, strata-parallel banding resembles sinter deposits, and some small vertical structures could be silicified reeds. The basal parts of those zones may have replaced underlying sedimentary beds. Red solid to dashed lines ("S") are thin zones of strata-bound massive replacement chalcodendry and quartz. Opaline chalcodendry and later calcite also fill pore spaces in pebble conglomerates in Thm. On the basis of dates of host rocks and field relations in both areas, the silica-producing processes in the strata ended by about 16.1 Ma. See full description in Wallace and others (2008a).

Area of diagenetically altered strata Diagenetic and post-diagenetic zeolites and chert are present in ash-rich sedimentary rocks in the lower part of member Tha in the west-central part of the map area, as well as in member Thm near the center of the map area. The areas typically have olive-green to cream colors, and the resulting rocks are microcrystalline and flinty. Zeolites include erionite and (or) clinoptilolite, with lesser chabazite. In addition, a persistent greenish replacement chert bed (ch) commonly is present at or near the contact between members Thm and Tha or in the absence of Thm, within Tha. This bed contains chabazite in addition to chert. See full description in Wallace and others (2008a).

Green chert bedding Dashed where approximately located.

Outline of mine workings The extents of mine workings in and near the Gold Quarry Mine and the related infiltration reservoir north of Maggie Creek were based on satellite imagery in 2007 and on the map of the Maggie Creek district (Morby, 2002). Andesite was quarried east of Maggie Creek, and sand and gravel were quarried west of Susie Creek north of the Humboldt River. Small dumps related to diatomite mining in the southeastern part of the map area are not shown.

Scale 1:50,000

0 1 kilometers

0 1 2 miles

0 2000 4000 6000 8000 10000 feet

CONTOUR INTERVAL 20 or 40 FEET

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

Base map: U.S. Geological Survey Adobe Summit 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Carlin East 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Carlin West 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Grindstone Mountain 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Huntsman Ranch 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Schroeder Mountain 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Swales Mountain NW 7.5' quadrangle (vector, accessed March 2020)
U.S. Geological Survey Swales Mountain NW 7.5' quadrangle (vector, accessed March 2020)

Adjoining 7.5' quadrangle names

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

1 Beaver Peak
2 Beaver Creek
3 Blue Basin
4 Sirdal Creek
5 Dinner Station
6 Rousso Creek NE
7 Swales Mountain NW
8 Swales Mountain
9 Adobe Summit
10 Kittridge Springs
11 Welches Canyon
12 Schroeder Mountain
13 Huntsman Ranch
14 Hunter
15 Elko West
16 Emigrant Pass
17 Carlin West
18 Carlin East
19 Grindstone Mountain
20 White Flats
21 Scouts Gulch
22 Paisaje
23 Ravens Nest
24 Bullion
25 Red Spring

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Mackay School of Earth Sciences and Engineering
College of Science
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Field work done in 2003–2008, 2010
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RECONNAISSANCE MAP OF THE CENOZOIC GEOLOGY IN THE CARLIN BASIN AREA, ELKO AND EUREKA COUNTIES, NEVADA

Alan R. Wallace

U.S. Geological Survey, Emeritus, Reno, NV
2020