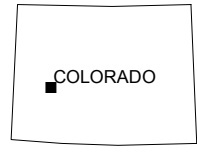
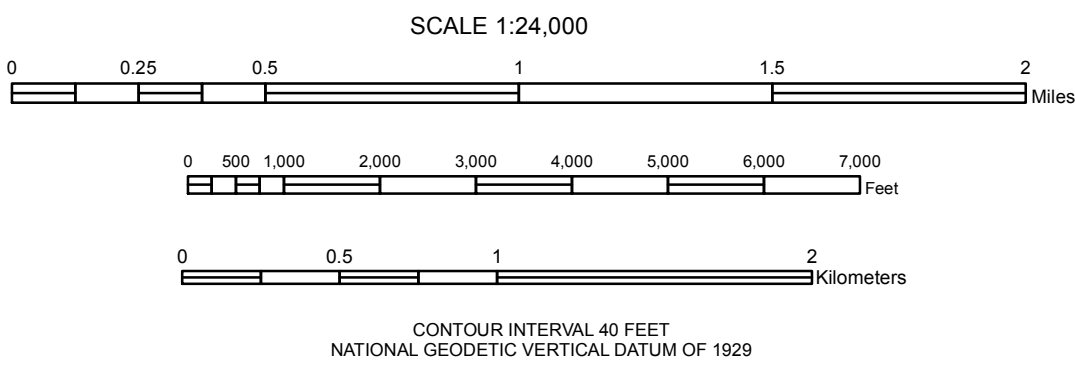
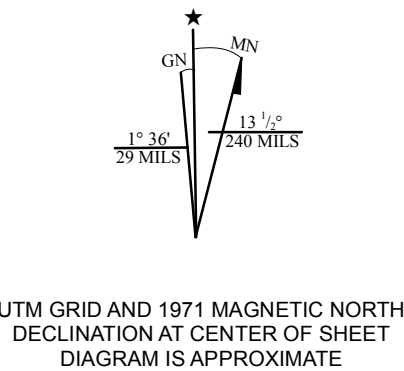


Base from U.S. Geological Survey, 1955, revised 1979
Polyconic Projection, 1927 North American Datum
10,000-foot grid based on Colorado coordinate system, central zone
1,000-meter Universal Transverse Mercator grid ticks, zone 13

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Program under STATEMAP Agreement No. G13AC00213



1	2	3
4	5	6
7	8	9

- 1 Gray Reservoir
- 2 Bowles
- 3 Somerset
- 4 Hatchville
- 5 Minnesota Pass
- 6 Grand View Mesa
- 7 Crawford
- 8 Mount Guero

Geology mapped in 2013
GIS and cartography by Pangaea Geospatial, LLC

LIST OF MAP UNITS

The complete description of map units and references are in the accompanying booklet

SURFICIAL DEPOSITS

HUMAN-MADE DEPOSITS

- af Artificial fill (late Holocene)
- dr Disturbed and/or reclaimed ground (late Holocene)

ALLUVIAL DEPOSITS

- Qan1a Alluvium one-a of the North Fork Gunnison River (Holocene)
- Qan1b Alluvium one-b of the North Fork Gunnison River (Holocene to late Pleistocene)
- Qan2 Alluvium two of the North Fork Gunnison River (late Pleistocene)
- Qan3 Alluvium three of the North Fork Gunnison River (late Pleistocene)
- Qan4 Alluvium four of the North Fork Gunnison River (late middle Pleistocene)
- Qan5 Alluvium five of the North Fork Gunnison River (late middle Pleistocene)

- Alluvial Deposits Along Tributary Streams
 - Qa Alluvial deposits along tributary streams (Holocene to late Pleistocene)
 - Qa1 Alluvium three along tributary streams (late Pleistocene)
 - Qa2 Alluvium four along tributary streams (late middle Pleistocene)

- Mixed Debris Flow, Alluvial Gravel, and Gravelly Mud Deposits
 - Qg1 Gravel or gravelly mud deposit one (Holocene)
 - Qg2 Gravel or gravelly mud deposit two (late Pleistocene)
 - Qg3 Gravel or gravelly mud deposit three (late Pleistocene)
 - Qg4 Gravel or gravelly mud deposit four (late middle Pleistocene)
 - Qg5 Gravel or gravelly mud deposit five (late middle Pleistocene)
 - Qg6 Gravel or gravelly mud deposit six (middle Pleistocene)
 - Qg7 Gravel or gravelly mud deposit seven (early middle Pleistocene)
 - Qg8 Gravel or gravelly mud deposits, undifferentiated (middle to early Pleistocene)
 - Qg9 Gravel, isolated pod or lag deposits (Holocene to Pleistocene)

MUDFLOW AND ALLUVIAL FAN DEPOSITS

- Qamf Alluvial, mud flow, and mud fan deposits (Holocene to late Pleistocene)
- Qf Alluvial fan deposits (Holocene to late Pleistocene)
- Qfo Older alluvial fan deposits (late Pleistocene)

MASS WASTING DEPOSITS

- Qls Landslide deposits (Holocene to middle Pleistocene)
- Qlsb Block-glide landslide of Mesaverde Group rocks (Holocene to Pleistocene)
- Qlsr Sandstone-block rubble deposits (Pleistocene)
- Qit Talus deposits (Holocene to late Pleistocene)
- Qirg Rock glacier deposits (Holocene to late Pleistocene)
- Qc Colluvial deposits (Holocene to middle Pleistocene)
- Qcl Colluvial flatiron (Pleistocene)

EOLIAN DEPOSITS

- Qe Loess or clay-chip dune deposits (Holocene to late Pleistocene)

BEDROCK UNITS

TERTIARY INTRUSIVE ROCKS

- Ti Monzonite porphyry (Oligocene)
- Iron-rich, banded monzonite at outer wall of laccolith
- Monzonite dike or sill — dashed where approximately located

CRETACEOUS SEDIMENTARY ROCKS

- Mesaverde Group (Upper Cretaceous)
 - Kir Rollins Sandstone Member of Iles Formation
- Mancos Shale (Upper Cretaceous)
 - Kmu Upper part of Mancos Shale, undivided
 - Sandstone zone in upper part of Mancos Shale
 - Kmss Sharon Springs Member
 - Kmp Prairie Canyon Member
 - Kms Smoky Hill Member
 - Limestone bed in upper part of Smoky Hill Member
 - Kmz Montezuma Valley Member

OLDER SEDIMENTARY, METAMORPHIC, AND IGNEOUS ROCKS

- Kml Lower part of Mancos Shale, including Montezuma Valley, Juana Lopez, Blue Hill, Fairport, Bridge Creek, Hartland, and Graneros Members, undivided (Upper Cretaceous) — Shown on cross section only
- Kmdb Mowry Shale, Dakota Sandstone, and Burro Canyon Formation, undivided (Upper and Lower Cretaceous) — Shown on cross section only
- Jm Morrison Formation (Upper Jurassic) — Shown on cross section only
- Jwe Wanakah Formation and Entrada Sandstone of the San Rafael Group, undivided (Middle Jurassic) — Shown on cross section only
- pC Precambrian rocks — Shown on cross section only

- Contact — Dashed where approximately located
- Fault — Dashed where approximately located; dotted where concealed; labeled U for upthrown and D for downthrown
- Anticline — Dashed where approximately located; end of arrow indicates direction of plunge
- Syncline — Dashed where approximately located; end of arrow indicates direction of plunge
- Landside scarp — Top of scarp; ties point downhill
- Lobe crest — In landslide or rock glacier deposits
- Strike and dip of sedimentary rocks — Showing direction and angle of dip in degrees
- Strike and dip of fracture or joint sets — Showing direction and angle of dip in degrees
- Alignment of cross section

GEOLOGIC MAP OF THE PAONIA QUADRANGLE, DELTA COUNTY, COLORADO

By David C. Noe
2015