

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 and disturbed surfaces (latest Holocene)

ALLUVIAL DEPOSITS

Qa Stream and flood-plain alluvium (Holocene)
Qtc Stream terrace alluvium (Holocene to upper Pleistocene)
Qts Stream terrace alluvium (upper Pleistocene)
Qlt Stream terrace alluvium (middle? Pleistocene)
Qf Alluvial-fan deposits (Holocene to upper Pleistocene)
Qfo Alluvial-fan deposits (upper and middle? Pleistocene)
Qdf Debris-fan deposits (Holocene and upper Pleistocene)

MASS-WASTING DEPOSITS

Qc Colluvium (Holocene and upper Pleistocene)
Qoc Eolian Colluvium (Holocene)
Qls Mass-movement deposits, undivided (Holocene to Pleistocene)
Qlso Mass-movement deposits (Pleistocene?)
Qef Earthflow deposits (Holocene? to Pleistocene?)

ALLUVIAL AND MASS-WASTING DEPOSITS

Qac Alluvium and colluvium (Holocene and upper Pleistocene)
Q Quaternary deposits, undifferentiated—Shown only in cross sections

QUATERNARY OR TERTIARY DEPOSITS

QTg Gravel deposits (lower Pleistocene? to Pliocene?)

BEDROCK UNITS

TERTIARY SEDIMENTARY AND VOLCANIC DEPOSITS

Tgb Gravel, breccia and sand deposits (Oligocene)
Tg Gravel deposits (Oligocene)
Tc Carpenter Ridge Tuff (Oligocene)
Tf Fish Canyon Tuff (Oligocene)
Ts Sapinero Mesa Tuff (Oligocene)
Td Blue Mesa Tuff (Oligocene)
Te Tuffs of East Elk Creek (Oligocene)
Tw West Elk Breccia (Oligocene)
Twg Gravel of the West Elk Breccia (Oligocene)

MESOZOIC SEDIMENTARY ROCKS

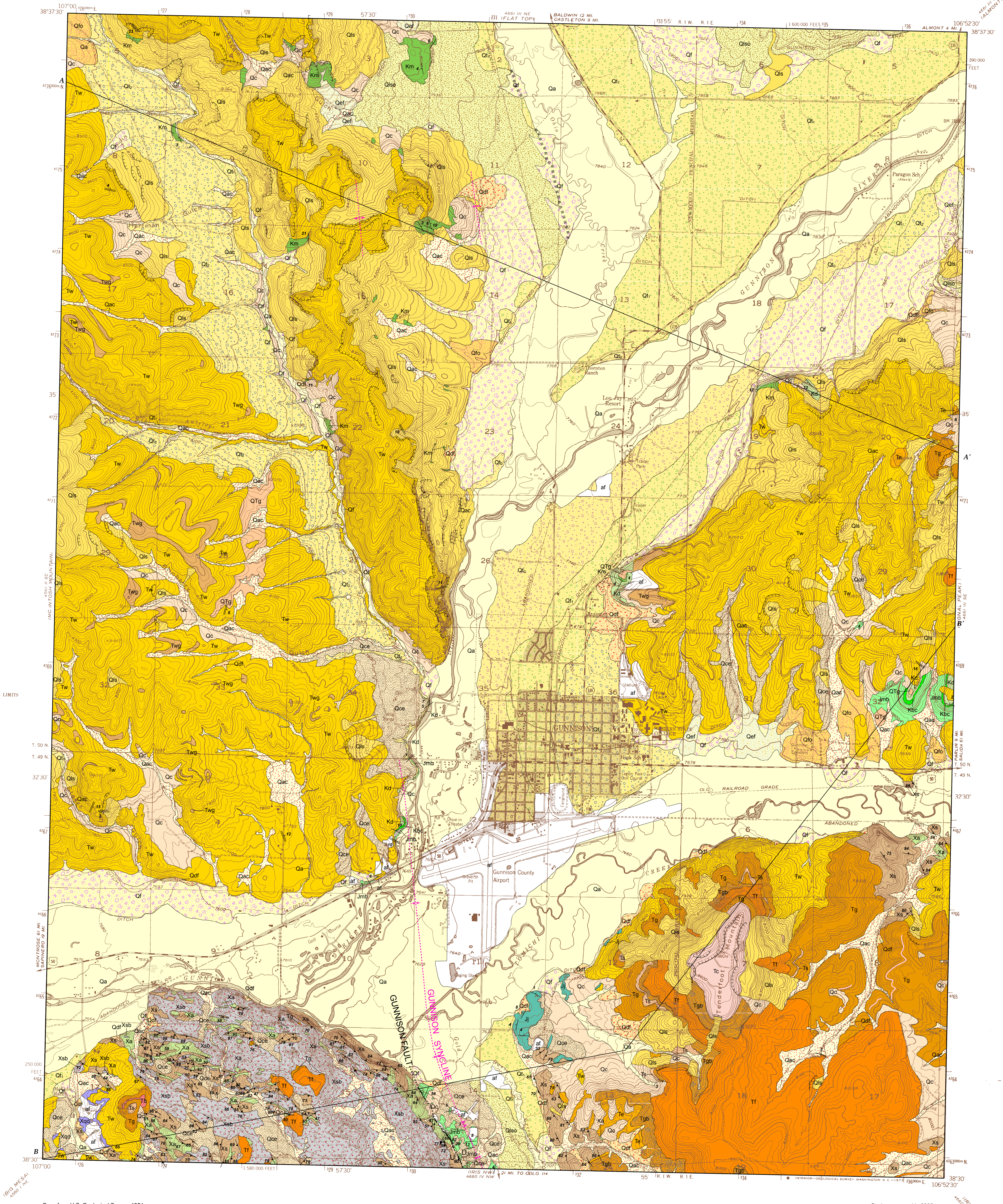
Km Mancos Shale (Upper Cretaceous)
Kd Dakota Sandstone (Upper Cretaceous)
Kbc Burro Canyon Formation (Lower Cretaceous)
Jmb Brushy Basin Member of the Morrison Formation (Upper Jurassic)
Jl Junction Creek Sandstone (Upper Jurassic)

PROTEROZOIC IGNEOUS AND METAMORPHIC ROCKS

Xsb Tonalite of South Beaver Creek (Paleoproterozoic)
Xqd Quartz diorite (Paleoproterozoic)
Xs Biotite quartz schist (Paleoproterozoic)
Xa Amphibolite (Paleoproterozoic)

MAP SYMBOLS

Contact—Approximately located
High-angle fault—Dotted where inferred. U on upthrown side; D on downthrown side. Arrow indicates direction of dip; arrow number indicates field measurement of dip magnitude
Syncline—Dotted where axial trace is concealed
Overturned syncline—Dotted where axial trace is concealed
Anticline—Concealed
Landslide scarp
Ash horizon in gravel possibly correlative with the Sapinero Tuff
Topographic expression of Qt, terrace covered by younger deposits
Strike and dip of bedding or contacts
Inclined—Showing direction and angle of dip
Overturned—Showing direction and angle of dip
Strike and dip of foliation
Inclined—Showing direction and angle of dip
Vertical
Strike and dip of layering in volcanic breccia
Strike and dip of pumice foliation
Alignment of cross section



Base from U.S. Geological Survey, 1954
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

UTM GRID AND 1970 MAGNETIC NORTH
DECLINATION CENTER OF MAP
DIAGRAM IS APPROXIMATE

SCALE 1:24,000

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

Colorado
Quadrangle Location

1 2 3
4 5
6 7 8
ADJOINING 7.5' QUADRANGLES

Geology mapped in 2005
GIS and cartography by Karen Morgan

GEOLOGIC MAP OF THE GUNNISON QUADRANGLE, GUNNISON COUNTY, COLORADO

By Allen Stork, James C. Coogan, Alex Csar, and Raelene Wentz
2006



Bill Owens, Governor,
State of Colorado
Russell George, Executive Director,
Department of Natural Resources
Vincent Matthews,
State Geologist and Division Director,
Colorado Geological Survey