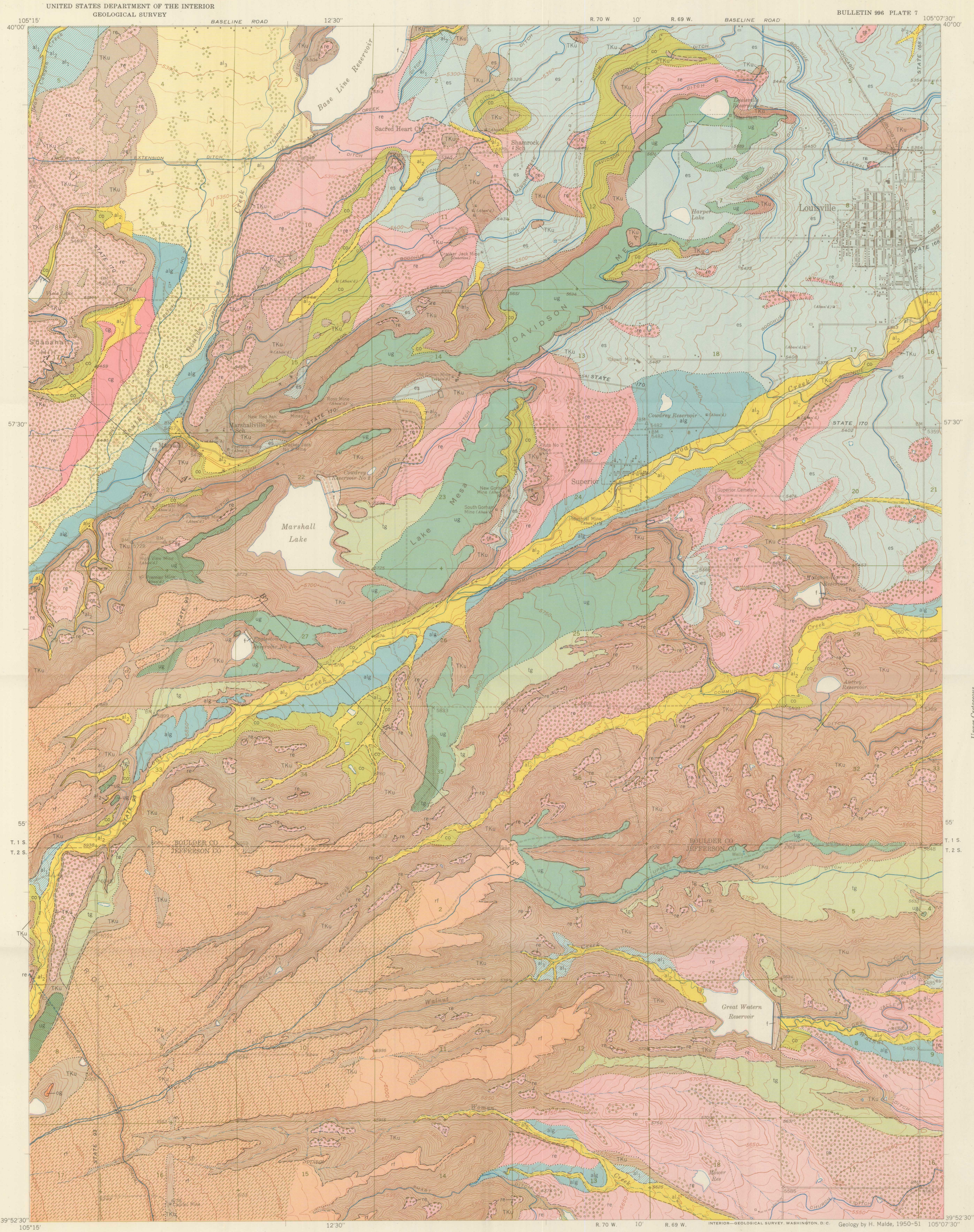




EXPLANATION

Artificial fill
Fill at coal mines and along roadways not mapped. Outlined only at larger dam sites

Post-Piney Creek alluvium
Reworked gravel (shown by pattern) locally certain by 1 to 3 feet of non-calcareous sand and silt, which, along South Boulder Creek, is divisible into two units. Mapped only in flood plain of main streams

Piney Creek alluvium
Light to dark gray, slightly calcareous clay, silt, sand, and gravel prominent in upland valleys, along Coal Creek, and on fans at mouths of small valleys tributary to South Boulder Creek. Commonly more than 10 feet thick, even in small valleys

Colluvium
Ranges from stony to clayey, depending upon source material immediately upslope. Rarely more than 3 feet thick on gentle slopes

Gravel fill
Cobble and pebble gravel containing scattered boulders. Chiefly confined to main valleys. Well rounded and granitic along South Boulder Creek; poorly rounded and quartitic elsewhere. Brown and clayey horizon at top grades downward into moderately calcareous zone

Alluvial fill
Stratified clay, silt, and sand with gravel lenses. As much as 7 feet thick east of Base Line Reservoir. Brown clayey prismatic layer at top grades downward into a grayish-buff loamy calcareous layer

Eolian silt and sand
Largely structureless. Thickness exceeds 10 feet in northeast part of quadrangle. Distinctive soil profile developed on this deposit is correlated with the mid-Wisconsin soil of Nebraska and Kansas

Cobble gravel
Coarse gravel along and partly under flood plain of South Boulder Creek. Rich in red sandstone from nearby foothills. Enriched and partly cemented by calcium carbonate below a depth of 12 to 18 inches

Undifferentiated upland deposits
Strongly weathered alluvial, colluvial, and eolian deposits residual upon valley walls and lower interfluvies. Gravelly areas shown by pattern. Impregnated with calcium carbonate below a red-brown clayey layer which is only locally preserved

Terrace gravel
Strongly weathered gravel on terraces 150 feet or more above valley bottoms and related to present integrated drainage. The deposit reaches a maximum of 10 feet in thickness and locally contains much sand and silt. Calcium carbonate-impregnated layer is usually at the surface but is locally buried by relictum (re)

Upland gravel
Strongly weathered gravel on Davidson Mesa, Lake Mesa, and pediment remnants (probably correlated) below Rocky Flats. Southern part reworked from older surficial deposits; northern part chiefly derived from source rocks in the mountains. Low-lime-content facies (shown by pattern) grades down-slope into calciche facies

Gravel on Rocky Flats
Pediment gravel; boulders and cobbles near mountain front, and cobbles and pebbles with sand lenses at eastern remnants. Strongly weathered. Ranges in thickness from less than 1 foot to about 50 feet on dissected, steeply dipping bedrock; average thickness is about 10 feet. Low-lime-content facies (shown by pattern) grades down-slope into calciche facies

Old gravel
Boulder and cobble gravel on bedrock knob standing 10 feet above Rocky Flats. May once have been continuous with gravel on bench about 100 feet above Rocky Flats, 1 1/4 miles to the NNW (in Eldorado Springs quadrangle)

Undifferentiated bedrock
Cretaceous Pierre shale, Fox Hills sandstone, Laramie and Arapahoe formations, and probably lower part of Denver formation on east border of quadrangle at the boundary of Boulder and Jefferson Counties. Paleocene strata may be present under Rocky Flats east of the Capitol mine

Recent

Wisconsin

Pleistocene

Pliocene or lower Pleistocene

Upper Cretaceous and Paleocene

TERTIARY OR QUATERNARY

TERTIARY AND CRETACEOUS

TRUE NORTH

MAGNETIC NORTH

APPROXIMATE MEAN DECLINATION, 1950

SURFICIAL GEOLOGIC MAP OF LOUISVILLE QUADRANGLE, COLORADO
Scale 1:24,000
0 1 2 Miles
Contour interval 10 feet
Datum is mean sea level