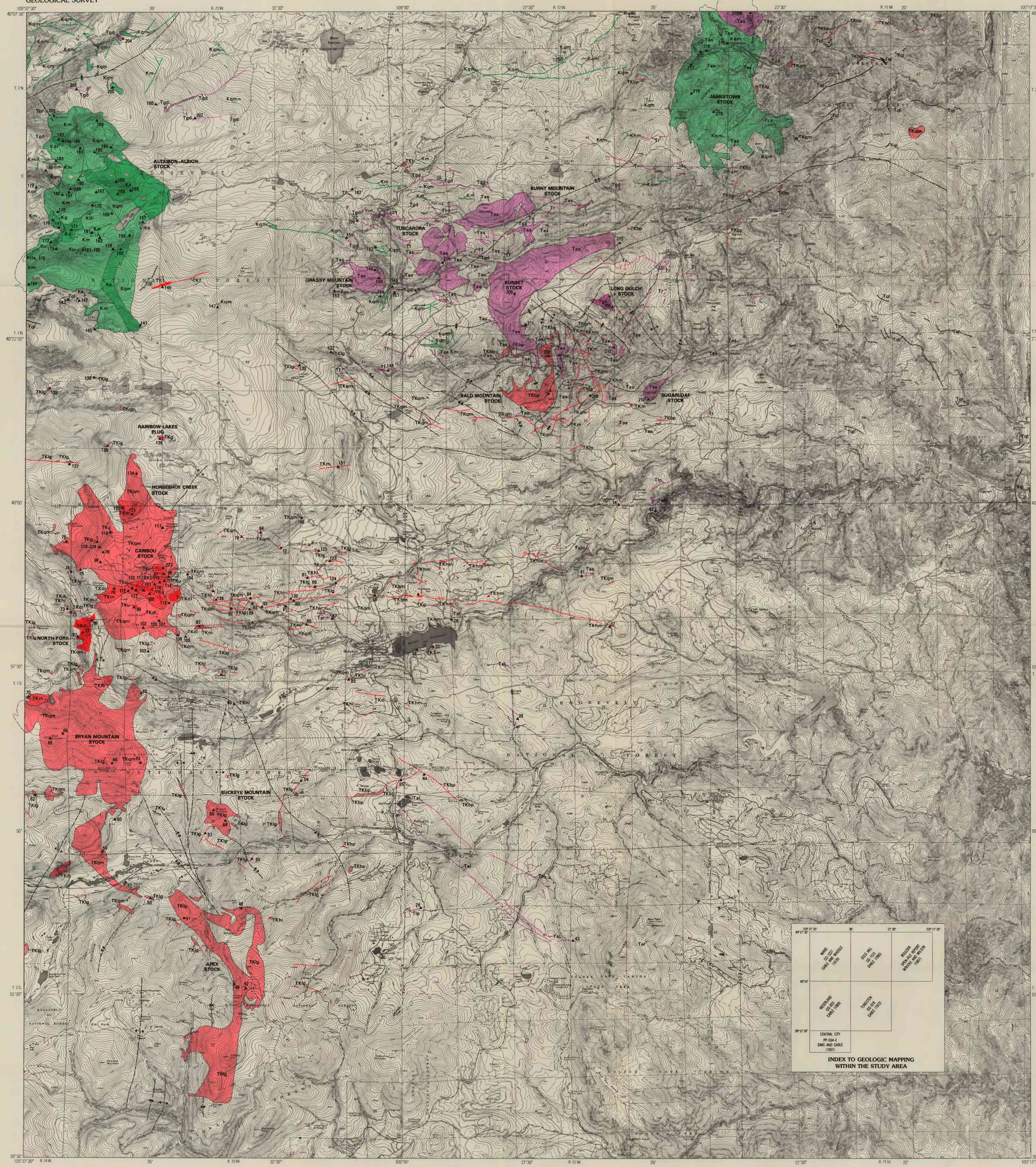

Base from U.S. Geological Survey, 1:24,000: Boulder, 1966, Central City and Black Hawk, 1972, Eldorado Springs and Ralston Buttes, 1965–71, Gold Hill, 1957, Nederland and Tungsten, 1972, and Ward, 1957

EXPLANATION

Horizontal position does not necessarily indicate relative age

Tas | Tf | Tr | Tal
Tgd | Tlp | Tabl

ROCKS OF EOCENE OR PALEOCENE AGE

Tas ALKALI FELDSPAR SYENITE AND QUARTZ SYENITE PORPHYRY—Light-gray porphyritic rock that weathers dark brownish gray. Dike rocks are less porphyritic. Labeled Tas in Gable (1980) and TKs in Gable (1972)

Tf FELSITE—Light-gray, dense, aphanitic dike rock. Appears to be associated with the syenite stocks (Tas)

Tr RHYOLITE AND RHYOLITE PORPHYRY—Dense, white to light-gray porphyritic dike rock. Appears to be associated with the alkali feldspar syenite (Tas)

Tal AUGITE LATITE PORPHYRY—Dense, dark-gray to almost-black dike rock containing augite phenocrysts. Labeled TKd in Gable (1980)

Tgd GRANODIORITE AND BIOTITE-QUARTZ PORPHYRY—Light-colored, fine- to medium-grained or commonly porphyritic rock. Biotite-quartz porphyry, a dike rock, contains prominent biotite, plagioclase, and subrounded quartz phenocrysts

Tlp LIMBURGITE PORPHYRY—Very dark gray, fine-grained dike rock. Mapped as TKlp in Gable (1972) and Tlp in Gable (1980)

Tabl BIOTITE-PYROXENE-HORNBLENDE LATITE PORPHYRY—Dike rock. Labeled Tbl in Gable (1980) and TKbl in Gable (1972)

Tbl | Tql

ROCKS OF TERTIARY(?) AGE

Tbl BIOTITE-QUARTZ LATITE—Very dark gray, dense dik rock peppered with biotite flakes. One dike at northwest corner of Audubon-Albion stock

Tql BIOTITE-QUARTZ LATITE PORPHYRY AND QUARTZ LATITE—Light- to dark-gray dike rock having an aphanitic groundmass containing phenocrysts of biotite, plagioclase, and quartz. In Green Lakes area. Labeled Tbl in Gable and Madole (1976)

TKb | TKu | TKg | TKdi | TKm | TKhl
TKhm | TKib | TKf | TKqm | TKlg | TKbp

ROCKS OF TERTIARY OR LATE CRETACEOUS AGE

TKb OLIVINE BASALT—Black, dense, and fine-grained. Occurs as small plugs north of Tuscarora stock in Chipmunk gulch

TKu PYROXENITE—Dark-greenish-gray, medium-grained rock in the Caribou stock. Predominantly rich in pyroxene and magnetite; contains varying amounts of biotite, hornblende, and apatite, labeled Tdi in Gable (1969). Locally, pyroxenite contains titaniferous magnetite-rich lens from 0.5 m to 6 m thick

TKg GABBRO AND MONZOGABBRO—Dark, medium- to coarse-grained rock similar to hornblende-pyroxene diorite; however, plagioclase composition is An_{50}. In Rainbow Lakes area

TKdi MONZODIORITE AND HORNBLENDE-PYROXENE DIORITE—Dark, medium-grained, mottled black-and-white rock. Ratio of plagioclase feldspar to total feldspar greater in diorite; plagioclase composition An_{50} or less. Locally hornblende-pyroxene diorite contains as much as 15 percent biotite. Small amounts of quartz present in the biotite-bearing hornblende-pyroxene diorite

MONZONITE AND ASSOCIATED ROCKS

TKm Monzonite—Gray, mottled black-and-white, medium-grained rock. Mafic minerals include hornblende, pyroxene, and some biotite. Accessories include apatite, ore minerals, and sphene. Occurs in central part of Caribou stock and in sparse dikes

TKhl Hornblende latite and hornblende latite porphyry—Medium- to dark-gray, dense dike rock, having an aphanitic groundmass. Phenocrysts are large, visible crystals of hornblende, pyroxene, and some biotite or plagioclase

TKhm Hornblende-bearing monzonite—Dike rock having the composition of monzonite but finer grained and containing visible hornblende

TKib INTRUSIVE BRECCIA—Breccia consisting of altered fragments of country rock in a matrix of undifferentiated monzonite porphyry. Southwest of Bryan Mountain stock

TKf FELSITE—Fine-grained, dense leucocratic monzonite or quartz monzonite. Due east of Audubon-Albion stock

TKqm QUARTZ MONZONITE—Light-gray, mottled black-and-white, medium-grained rock. Mafic minerals include hornblende, minor pyroxene, biotite, and opaque oxides

TKlg GRANODIORITE AND RHYODACITE—Includes leucocratic granodiorite, granodiorite porphyry, dellenite, and dikes of alaskite, rhyodacite, rhyodacite porphyry, and peralkaline and alkaline granite

TKbp BOSTONITE PORPHYRY—Lilac colored where fresh; weathered surfaces are light brownish pink. Porphyry has an aphanitic groundmass and large cream or white orthoclase crystals scattered throughout

Ku | Kg | Kdi | Km
Khm | Kqm | Ks

ROCKS OF LATE CRETACEOUS AGE

Ku PYROXENITE—Dark, almost black, medium- to coarse-grained rock in the southern half of the Audubon-Albion stock. Very similar in composition to the pyroxenite in the Caribou stock (TKu) except that it is not associated with lenses of titaniferous magnetite

Kg GABBRO AND MONZOGABBRO—Dark-greenish-gray, fine-grained, massive rock associated with scattered dikes or veinlets of feldspar and, rarely, quartz

Kdi MONZODIORITE AND HORNBLENDE-PYROXENE DIORITE—Mixed rock containing clots and streaks of dark minerals, especially hornblende. Somewhat mottled because of considerable plagioclase

Km MONZONITE—Gray, mottled black-and-white rock, medium- to coarse-grained, commonly showing mineral alinement and some flow layering. At contact with more mafic rocks, the monzonite is richer in apatite and sphene

Khm HORNBLENDE-BEARING MONZONITE—Monzonite dike rock in which hornblende is visible; west of Jamestown stock

Kqm QUARTZ MONZONITE—More leucocratic rock than monzonite but has the same mottling. Quartz generally 10 percent or more

Ks ALKALI SYENITE AND QUARTZ SYENITE PORPHYRY—Light-gray to pinkish-gray, fine- to medium-grained, leucocratic, porphyritic rock. Syenite of the Audubon-Albion stock is phaneritic, having some large orthoclase and plagioclase feldspars

CONTACT—Approximately located. Dashed where inferred

DIKE—Dashed where inferred

▲162 SAMPLE LOCALITY AND NUMBER—Chemical analysis, semiquantitative spectrographic analysis, or mode. See tables in text

FOLD AXES

Antiform—Showing approximate trace of axial plane

Synform—Showing approximate trace of axial plane

Recumbent synform—Showing approximate trace of axial plane

Overturned antiform—Showing approximate trace of axial plane

GEOLOGIC MAP SHOWING DISTRIBUTION OF CRETACEOUS-TERTIARY IGNEOUS ROCKS, NORTHERN PART OF THE FRONT RANGE MINERAL BELT, BOULDER, GILPIN, AND JEFFERSON COUNTIES, COLORADO