EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY

Pleistocene and Recent — Q: Recent alluvium, landslides and rock streams, and Pleistocene glacial drift

UNCONFORMITY

Pleistocene — Qht: High terrace gravels of second or earlier stage of glaciation

UNCONFORMITY

CARBONIFEROUS

Permian (?) — Cwy: "Wyoming" formation (*Red and mottled sandstone and conglomerate, with a few beds of limestone*)

Pennsylvanian — Cmr: Maroon formation (*Coarse reddish arkosic sandstone, with reddish shale and thin beds of limestone, especially at top and base*)

Cw: Weber (?) formation (*Coarse-grained arkose, micaceous sandstone, and quartzite, alternating with sandy, micaceous, argillaceous, and bituminous shale. Contains nonpersistent lenses of impure limestone, which in Tenmile district carries ore bodies*)

Cl: Limestones in "Wyoming," Maroon, and Weber (?) formations

Mississippian — Clv: Leadville limestone ("Blue" limestone) (*Heavy-bedded dark-blue fine-grained dolomite, almost black at top; usually thin-bedded and passing into shale at base; a few layers of quartzite and shale*)

DEVONIAN (?) — Upper Dev. (?)

UNCONFORMITY (?)

ORDOVICIAN — Oyl: Yule limestone (*At top coarse grayish-white quartzite, in places containing shaly layers—the "Parting" quartzite member; underlain by thin-bedded light-gray to dark-gray dolomitic limestone, interrupted by many shaly layers and passing into shale at top—the "White" limestone member*)

CAMBRIAN — Upper Cambrian — Єs: Sawatch quartzite ("Lower" quartzite) (*Thin-bedded to heavy-bedded grayish-white quartzite, with usually thin conglomerate at base and 40 to 50 feet of greenish to black argillaceous and calcareous shale ("transition shales") at top. Includes "red-cast beds"*)

GREAT UNCONFORMITY

METAMORPHIC AND OLDER IGNEOUS ROCKS

PRE-CAMBRIAN

pre Єgps: Granite, pegmatite, gneiss, and schist (*Crystalline quartz-feldspar-biotite rock, with schistose or banded and often contorted structure, injected with pegmatite and granite; in Tenmile district later eruptives are included*)

Separately mapped only in the Alma district:

pre Єgr: Granite and pegmatite

pre Єgs: Gneiss and schist

YOUNGER IGNEOUS ROCKS

TERTIARY AND EARLY QUATERNARY (?)

Tr: Rhyolite and rhyolite agglomerate

LATE CRETACEOUS OR EARLY TERTIARY

qm: Quartz monzonite stocks (*Gray, medium-grained, in part with large phenocrysts of orthoclase*)

di: Diorite and diorite porphyry (*Sills and dikes; includes "porphyrite" of Leadville atlas and "diorite porphyrite" of Patton in Alma district*)

qgp: Quartz monzonite porphyry and granodiorite porphyry (*Sills and dikes; includes Gray porphyry group of Leadville district, Lincoln porphyry of Tenmile and Alma districts, Elk Mountain and Quail porphyries of Tenmile district, quartz monzonite porphyry of Alma district, and other porphyries of Leadville atlas. Mostly sills; a few dikes. Different varieties, of gray color and fine to rather coarse-grained groundmass with small to very large crystals of felspar and quartz and less conspicuous crystals of biotite or hornblende*)

wp: White porphyry (*Light-gray to white fine-grained aphanitic granodiorite porphyry*)

Fault

GEOLOGIC MAP OF LEADVILLE-ALMA-TENMILE REGION, COLORADO

0 1 2 3 4 5 MILES

Contour interval 200 feet
Datum is mean sea level

1927

Compiled from Plates 6 and 7 of the atlas accompanying U. S. Geol. Survey Mon. 12, by S. F. Emmons; Tenmile folio (No. 48), U. S. Geol. Survey, by S. F. Emmons; Plate 2 of Colorado Geol. Survey Bull. 3, by H. B. Patton and others; detailed survey of Leadville mining district by S. F. Emmons, J. D. Irving, and G. F. Loughlin. Complete revision of names of towns, creeks, and mountains has not been attempted.