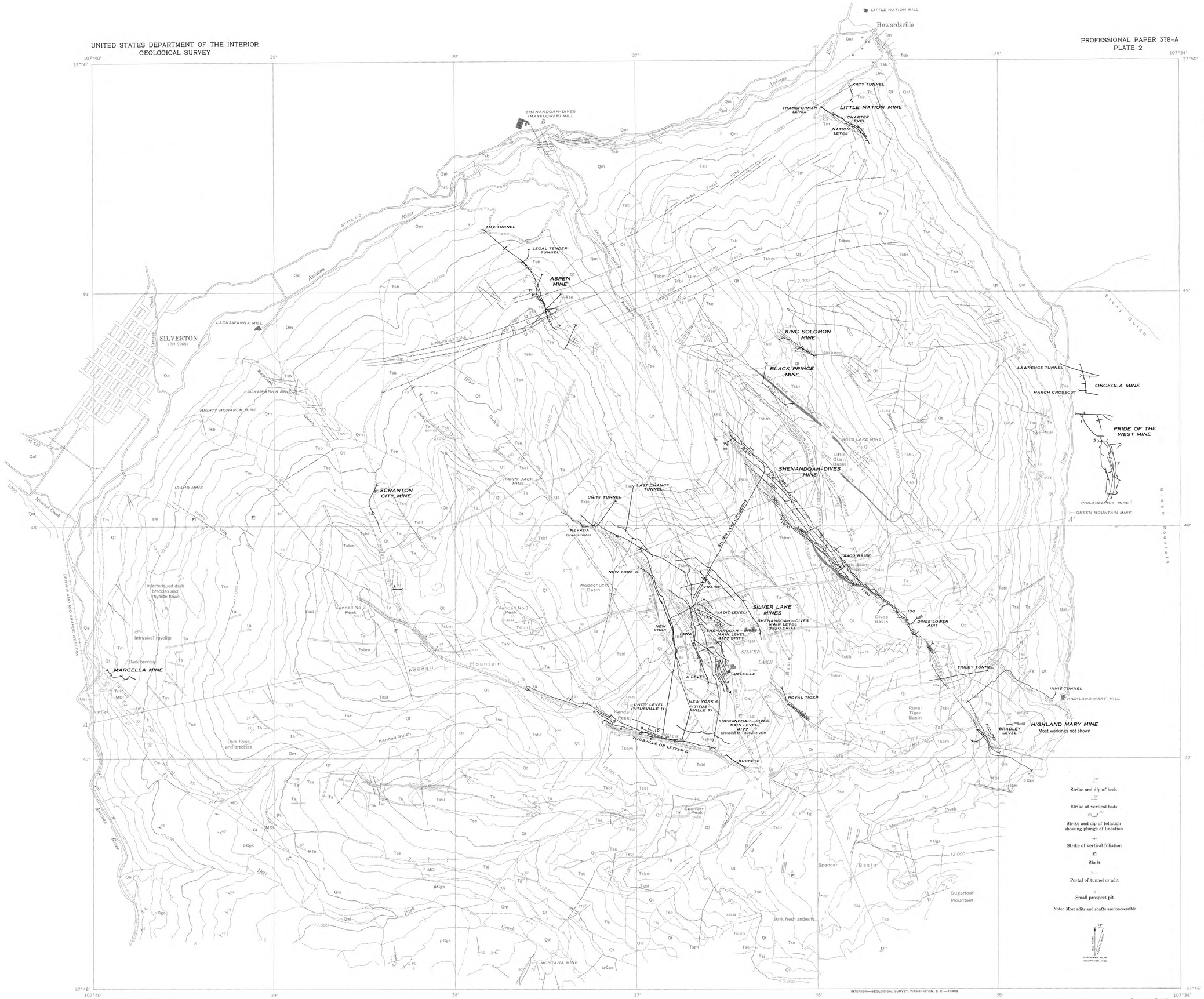

Base from U. S. Geological Survey advance sheet, Silverton and vicinity, San Juan Co., Colorado, 1931

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—10409

Prepared by D. J. Varnes from company mine maps and field notes, 1946

MAP SHOWING RELATIONSHIP OF THE PRINCIPAL WORKINGS OF THE LARGER MINES IN THE SILVERTON MINING AREA, COLORADO

SCALE 1:12 000

1000 0 1000 2000 3000 4000 5000 6000 FEET

CONTOUR INTERVAL 200 FEET
DATUM IS MEAN SEA LEVEL

EXPLANATION

QUATERNARY — *Pleistocene and Recent*

Qal — Alluvium

Qt — Talus and rock glaciers

Qls — Landslide deposits

Qm — Glacial till

UNCONFORMITY

Dikes, contacts, faults and veins are dashed where approximately located, dotted where concealed

Mineralized vein or fault — Fissure having altered or stained walls

Where a vein is coincident with a fault, only the vein is shown; half arrows indicate relative horizontal movement on fault; short arrow indicates direction of dip; D, downthrown side of fault; U, upthrown side; figure indicates amount of throw; short cross line and figure 90 indicates vertical vein

Ta — Andesite and latite dike
Light-green to dark-grayish-green fine-grained andesite and latite with small phenocrysts of gray feldspar, hornblende, biotite, and, more rarely, augite

Tg — Granite porphyry
Dikes and irregular masses of light-green granite porphyry having abundant orthoclase and quartz phenocrysts in a very finely granular groundmass of orthoclase and quartz

Tr — Rhyolite
A single white very fine grained flow-banded dike just south of Howardsville

Tm — Quartz monzonite
Stocks and smaller bodies along the ring-fault zone and south of Silverton

TERTIARY

Miocene

Tsp — Pyroxene-quartz latite
Dense massive flows that weather light brown; groundmass grayish or greenish purple with sparse small feldspar and pyroxene phenocrysts; abundant small crystals of magnetite and clots of chlorite; present only on Little Giant and King Solomon Peaks

Silverton volcanic series — Burns quartz latite

Tsbu — Upper tuff member
Gray to light-lavender latitic platy tuff; contains one or two dense fine-grained limy beds 3 inches to 1 foot thick

Tsbm — Middle flow member
Massive flows with white or light-green feldspar phenocrysts in finely crystalline dark-purplish-gray to light-green groundmass; thinly bedded gray fluidal facies contains prominent feldspar and bronze-color biotite phenocrysts; some interbedded green latite breccias

Tsbl — Lower tuff-breccia member
Light-green breccia composed of subangular to rounded fragments of green latite containing large white or pinkish feldspar phenocrysts; fragments imbedded in matrix of light-green tuff

Tsb — Burns quartz latite undivided

UNCONFORMITY

Tse — Eureka rhyolite
Mostly gray or pinkish-gray rhyolite and rhyolitic flow breccia; thin-bedded tuff at the top in many places; lower part consists largely of tuff-breccia derived from erosion of San Juan tuff together with dark andesitic flows and some irregular bodies of rhyolite that may be intrusive

UNCONFORMITY

Miocene(?)

Tsj — San Juan tuff
A tuff-breccia composed largely of andesitic and latitic fragments. In Spencer Basin the lower part of the formation consists of a conglomerate containing some granitic cobbles in addition to volcanic rocks

UNCONFORMITY

PENNSYLVANIAN

IPh — Hermosa formation
A few feet of green arkosic sandstone, exposed on the spur between Deer Park and Kendall Gulch, tentatively assigned to the Hermosa formation

UNCONFORMITY

DEVONIAN AND MISSISSIPPIAN

MDl — Leadville limestone and Ouray limestone undivided
Massive to well-bedded blue-gray compact limestone; lower beds commonly pinkish; present along the east side of the Animas Canyon below Silverton and as blocks included in the Eureka rhyolite in Cunningham Gulch

DEVONIAN

Upper Devonian

De — Elbert formation
Thin-bedded yellow, green, red, and purple calcareous shales and limestone. Best exposure at the mouth of Kendall Gulch

UNCONFORMITY

CAMBRIAN

Upper Cambrian

Ci — Ignacio quartzite
Well-bedded dense white and pink quartzite with thin partings of red and yellow shale; basal conglomerate composed of quartzite cobbles

UNCONFORMITY

PRECAMBRIAN

pCgs — Gneiss and hornblende-biotite schist
Strongly foliated with a few diabase bodies injected along the planes of foliation. In the extreme southwest corner of the area the schist has been cut and assimilated by irregular bodies of younger Precambrian granite

Contact

Fault, showing dip and relative movement
Half arrows show direction of relative horizontal movement; short arrow shows direction of dip; U, upthrown side, D, downthrown side; figure indicates amount of throw in feet; short cross line and figure 90 indicate vertical fault