DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
79-844

PLATE I

EXPLANATION

QUATERNARY

- Qd — Mine dump and road fill
- Qtl — Mine tailings
- Qr — Volcanic rubble
- Qa — Alluvium
- Qt — Talus

TERTIARY

MIOCENE(?)

- Tg — Gravel of Dripping Spring Wash

PALEOCENE

- Tbx, Tgp, Tdp, Trp, Tga, Tbg, Tqd — Christmas intrusive complex
  - Tbx, intrusion breccia
  - Tgp, granodiorite porphyry
  - Tdp, dacite porphyry
  - Trp, biotite rhyodacite porphyry
  - Tga, granodiorite (Cross section, Plate II)
  - Tbg, biotite granodiorite porphyry
  - Tqd, quartz diorite

CRETACEOUS or TERTIARY

- KTa — Aplite
- KTl — Quartz latite porphyry
- KTp — Plagioclase porphyry
- Khr — Hornblende rhyodacite porphyry
- Kap1, Kap2 — Hornblende andesite porphyry
  - Kap1, coarse-grained variety
  - Kap2, fine-grained variety
- Kwc, Kwcg, Kwcs — Williamson Canyon Volcanics
  - Kwc, volcanic breccia and lava flows
  - Kwcs, sandstone and siltstone
  - Kwcg, conglomerate

CRETACEOUS

PENNSYLVANIAN

- Pn — Naco Limestone

MISSISSIPPIAN

- Me — Escabrosa Limestone (Cross section, Plate II)

- Contact; dashed where approximately located or concealed; arrow indicating dip where known
- Fault; long dashes where approximately located, short dashes where concealed and inferred; arrow indicating dip where known; D, downthrown side, U, upthrown side
- Shaft
- Adit
- X Prospect pit
- Strike and dip of beds
- Epidote-quartz veins
- Breccia dike
- Strong shear zone; stippled where silicified
- Location of sample for chemical analysis (see Tables 1 and 7); s-surface sample, d-drill hole sample
- Location (along 19,200E) of basalt sample for chemical analysis (see Figure 31); s-surface sample, d- drill hole sample

13½° TRUE NORTH / MAGNETIC NORTH

SCALE 1:4800

1000 0 1000 Feet
200 0 200 Meters

Contour interval 10 feet

Geology by R. A. Koski, 1973-1975. Geology of open pit modified in part from map by D. S. Cook. Topographic base provided by Inspiration Consolidated Copper Company.

GEOLOGY OF THE
CHRISTMAS MINE AREA,
GILA COUNTY, ARIZONA
PLATE I

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

GEOLOGY OF THE CHRISTMAS MINE AREA, GILA COUNTY, ARIZONA

by

Randolph A. Koski

1979