



EXPLANATION

- FANLONGRATE (TERTIARY)—Includes Locomotive Fanlongrate and stratigraphically correlative Fanlongrate
- HORNBLende-BIOTITE GRANITOIDs (EARLY TERTIARY AND LATE CRETACEOUS)
- TWO-MICA GRANITEs (EARLY TERTIARY AND LATE CRETACEOUS)
- SEDIMENTARY ROCKs (PALeozoIC TO MIDDLE PROTEROZOIC)
- GRANITIC AND METASOPHIC ROCKs (NEOZOIC TO PROTEROZOIC)—As mapped, does not include the Early Proterozoic Pinal Schist

TRACTS

- Porphyry copper deposits (C1-C11)
- Skarn and porphyry copper-related skarn deposits (S1-S11)
- Stockwork molybdenum deposits (M1-M10)
- Tungsten-bearing vein deposits (W1-W5)

CORRELATION OF MAP UNITS

Qa	QUATERNARY
Qls	QUATERNARY
QTb	QUATERNARY AND TERTIARY
Tr	TERTIARY
Tc	TERTIARY
Tb	TERTIARY
Tca	TERTIARY
Tcb	TERTIARY
Tcd	TERTIARY
Tce	TERTIARY
Tcf	TERTIARY
Tcg	TERTIARY
Tch	TERTIARY
Tci	TERTIARY
Tcj	TERTIARY
Tck	TERTIARY
Tcl	TERTIARY
Tcm	TERTIARY
Tcn	TERTIARY
Tco	TERTIARY
Tcp	TERTIARY
Tcq	TERTIARY
Tcr	TERTIARY
Tcs	TERTIARY
Tct	TERTIARY
Tcu	TERTIARY
Tcv	TERTIARY
Tcw	TERTIARY
Tcx	TERTIARY
Tcy	TERTIARY
Tcz	TERTIARY
Tca	TERTIARY
Tcb	TERTIARY
Tcc	TERTIARY
Tcd	TERTIARY
Tce	TERTIARY
Tcf	TERTIARY
Tcg	TERTIARY
Tch	TERTIARY
Tci	TERTIARY
Tcj	TERTIARY
Tck	TERTIARY
Tcl	TERTIARY
Tcm	TERTIARY
Tcn	TERTIARY
Tco	TERTIARY
Tcp	TERTIARY
Tcq	TERTIARY
Tcr	TERTIARY
Tcs	TERTIARY
Tct	TERTIARY
Tcu	TERTIARY
Tcv	TERTIARY
Tcw	TERTIARY
Tcx	TERTIARY
Tcy	TERTIARY
Tcz	TERTIARY

DESCRIPTION OF MAP UNITS

- Qa ALLUVIUM (QUATERNARY)
- Qls LANDSLIDE (QUATERNARY)
- QTb BASALT OF SENTINEL PLAIN AND PINACATE VOLCANIC FIELD (QUATERNARY AND TERTIARY)
- Tb BASALT AND BASALTIC ANDESITE (TERTIARY)—Includes the andesite of Saguada Mountains; scattered capped basaltic flows, tuffs, and breccias
- Tr RHYOLITE, RHYODACITE, AND MINOR DACITE FLOWS AND PLUGS (TERTIARY)—Found in the Bates and Pozo Bonondo Mountains and Ajo Range
- Tc CHILLS LATEITE (TERTIARY)—Flows and flow breccias. Age is Miocene
- Tb RHYOLITE SUITE (TERTIARY)—Mostly extensive flows in the Saguada and Sand Tank Mountains. Rhyolite flows, flow breccias, and tuffe products in Saguada Mountains. Porphyritic biotite to biotite-hornblende-bearing rhyodacite and dacite are present in the Sand Tank Mountains. Generally, eruptions in Saguada Mountains are younger than those of Sand Tank Mountains
- Tca BASALTIC SUITE (TERTIARY)—Primarily coarse, porphyritic basalt and basaltic andesite
- Tcs CONGLOMERATE AND MINOR SANDSTONE (TERTIARY)—Highly scattered exposures. Unit includes the Miocene Tuleita Conglomerate; the only significant sedimentary rock unit within the Ajo volcanic field
- Td DACITE TO RHYOLITIC FLOWS, FLOW BRECCIAS, DUMPS, AND SILLS (TERTIARY)—Includes minor latite and andesitic tuffaceous rocks
- Trf RHYOLITIC FLOWS, RHYODACITE, ASH FLOW TUFFS, AND MINOR ANDESITE (TERTIARY)
- Tbv BASAL VOLCANIC ROCKS (TERTIARY)—Low-lying, typically poorly exposed, porphyritic plagioclase andesite and minor tuff. Includes Saguada Andesite (Gilluly, 1946)
- Tac ANDESITE OF CASTLE DOME MOUNTAINS (TERTIARY)
- Taf ANDESITE, FANLONGRATE, AND MINOR COARSE ARKOSIC SANDSTONE (TERTIARY)—Commonly found as intercalated steeply tilted sequence. Age is early Tertiary
- Tg RHYOLITE-HORNBLende GRANITOIDs (TERTIARY)—Age is early Tertiary
- Tkt TWO-MICA GRANITIC AND BIOTITE GRANITIC (TERTIARY AND CRETACEOUS)—Age is Late Cretaceous and early Tertiary
- Tkh HORNBLende-BIOTITE SERIES GRANITOIDs (TERTIARY AND CRETACEOUS)—Age is Late Cretaceous and early Tertiary
- Kjv SEDIMENTARY AND VOLCANIC ROCKS (CRETACEOUS AND (OR) JURASSIC)—Age is Late Jurassic and (or) Cretaceous
- Kjg GRANITIC ROCKS (CRETACEOUS OR JURASSIC)
- Jg GRANITIC AND SYENITIC ROCKS (JURASSIC)
- Jsv VOLCANIC AND MINOR SEDIMENTARY ROCKS (JURASSIC)
- hTc SEDIMENTARY ROCKS (PALeozoIC TO MIDDLE PROTEROZOIC)—Include the Middle Proterozoic Apache Group. Also include diabase
- YXg GRANITE (MIDDLE AND EARLY PROTEROZOIC)
- Xa UNDIFFERENTIATED SCHIST (EARLY PROTEROZOIC)—Includes the Pinal Schist
- pTc ONISES AND SCHIST (PRE-TERTIARY)—Age is Early and (or) Middle Proterozoic and (or) Neozoic
- pTg PARANISES (PRE-TERTIARY)—Age is Early and (or) Middle Proterozoic and (or) Paleozoic and (or) Neozoic

CONTACT—Dashed where approximately located
FAULT—Dashed where approximately located; dotted where concealed

SCALE 1:250 000

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1987

ARIZONA
AREA OF MAP

**HORNBLende-BIOTITE GRANITOID-RELATED DEPOSITS, STOCKWORK MOLYBDENUM DEPOSITS, AND TUNGSTEN-BEARING VEIN DEPOSITS
MINERAL RESOURCE ASSESSMENT OF THE AJO AND LUKEVILLE 1° BY 2° QUADRANGLES, ARIZONA**

By
Jocelyn A. Peterson, Dennis P. Cox, and Floyd Gray
1987

Simplified geologic map compiled by
Floyd Gray, R.J. Miller, and M.J. Grubensky

Explanatory pamphlet accompanies map
Interior—Geological Survey, Reston, Va.—1987
For sale by U.S. Geological Survey, Map Distribution,
Box 25286, Federal Center, Denver, CO 80225