



- EXPLANATION**
- BASALT OF SENTINEL PLAIN AND PINACATE VOLCANIC FIELD (QUATERNARY AND TERTIARY)
  - ZERO-MGAL RESIDUAL GRAVITY CONTOUR—Taken from Fourier high-pass gravity contour map of the Ajo quadrangle; hachures indicate lows
  - AREA OF RESIDUAL GRAVITY DATA
    - 10 to -15 mGal
    - Less than -15 mGal
  - WARM-WATER WELL—Temperature in °C

- TRACTS**
- Potential uranium source areas; based on the presence of monazite in stream-sediment-concentrate samples (U1-U5)
  - Placer gold deposits (P1-P4)
  - Continental evaporite deposits (E1-E11)
  - Calcic uranium deposits (G1-G3)
  - Geothermal areas (G1-G3)

**CORRELATION OF MAP UNITS**

Qa	QUATERNARY
Qta	
Qtb	
Tb	QUATERNARY AND TERTIARY
Ttr	
Tc	
Tr	
Tba	
Tca	TERTIARY
Td	
Tf	
Tg	TERTIARY AND CRETACEOUS
Tgh	
Kdv	CRETACEOUS AND (OR) JURASSIC
Kdb	
Jg	CRETACEOUS OR JURASSIC
Jh	
Ji	JURASSIC
Jj	
Pa	PRE-TERTIARY
Pb	
Pc	PALEOZOIC TO MIDDLE PROTEROZOIC
Pd	
Ye	MIDDLE AND EARLY PROTEROZOIC
Yf	
Xa	EARLY PROTEROZOIC

- DESCRIPTION OF MAP UNITS**
- Qa ALLUVIUM (QUATERNARY)
  - Qta LAPSILITE (QUATERNARY)
  - Qtb BASALT OF SENTINEL PLAIN AND PINACATE VOLCANIC FIELD (QUATERNARY AND TERTIARY)
  - Tb BASALT AND BASALTIC ANDESITE (TERTIARY)—Includes the andesite of Rinconada Mountains; scattered capping basaltic flows, tuffs, and breccias
  - Ttr RHODOLITE, RHODOLITE, AND MINOR DACITE FLOWS AND PLUGS (TERTIARY)—Found in the Bates and Pecos Redondo Mountains and Ajo Range
  - Tc CHLORITE LATICES (TERTIARY)—Flows and flow breccias. Age is Miocene
  - Tr RHODOLITE SUITE (TERTIARY)—Mostly extensive flows in the Sueda and Sand Tank Mountains. Rhodolite flows, flow breccias, and tuffs predominate in Sueda Mountains. Pophyritic basaltic to biotite-hornblende-bearing rhyolites and dacite are present in the Sand Tank Mountains. Generally, eruptions in Sueda Mountains are younger than those of Sand Tank Mountains
  - Tba BASALTIC SUITE (TERTIARY)—Primarily coarse, porphyritic basalt and basaltic andesite
  - Tca CONGLOMERATE AND MINOR SANDSTONE (TERTIARY)—Widely scattered exposures. Unit includes the Miocene Matitas Conglomerate; the only significant sedimentary rock unit within the Ajo volcanic field
  - Td DACITE TO RHODOLITE FLOWS, FLOW BRECCIAS, DIPS, AND SILLS (TERTIARY)—Includes minor latite and andesitic tuffaceous rocks
  - Tf RHODOLITE FLOWS, RHODOLITE, ASH FLOW TUFFS, AND MINOR ANDESITE (TERTIARY)
  - Tbv BASAL VOLCANIC ROCKS (TERTIARY)—Low-lying, typically poorly exposed, porphyritic plagioclase andesite and minor tuff. Includes Sueda Andesite (Gilluly, 1946)
  - Tac ANDESITE OF CASTLE DOME MOUNTAINS (TERTIARY)
  - Taf ANDESITE, TANGLOMERATE, AND MINOR COARSE ARKOSIC SANDSTONE (TERTIARY)—Commonly found as intercalated steeply tilted sequence. Age is early Tertiary
  - Tg BIOTITE-HORNBLende GRANITOIDES (TERTIARY)—Age is early Tertiary
  - Tgh TUP-MICA GRANITE AND BIOTITE GRANITE (TERTIARY AND CRETACEOUS)—Age is Late Cretaceous and early Tertiary
  - Tjv HORNBLENDE-BIOTITE SERIES GRANITOIDES (TERTIARY AND CRETACEOUS)—Age is Late Cretaceous and early Tertiary
  - Kdv SEDIMENTARY AND VOLCANIC ROCKS (CRETACEOUS AND (OR) JURASSIC)—Age is Late Jurassic and (or) Cretaceous
  - Kdb GRANITIC ROCKS (CRETACEOUS OR JURASSIC)
  - Jg GRANITIC AND SYENITIC ROCKS (JURASSIC)
  - Jh VOLCANIC AND MINOR SEDIMENTARY ROCKS (JURASSIC)
  - Ji SEDIMENTARY ROCKS (PALEOZOIC TO MIDDLE PROTEROZOIC)—Include the Middle Proterozoic Apache Group. Also include diabase
  - Ye GRANITE (MIDDLE AND EARLY PROTEROZOIC)
  - Xa UNDIFFERENTIATED SCHIST (EARLY PROTEROZOIC)—Includes the Pinal Schist
  - Pc GNEISS AND SCHIST (PRE-TERTIARY)—Age is Early and (or) Middle Proterozoic and (or) Mesozoic
  - Pd PARAGNEISS (PRE-TERTIARY)—Age is Early and (or) Middle Proterozoic and (or) Paleozoic and (or) Mesozoic

Base from U.S. Geological Survey 1:250,000, Ajo, 1955, and Lukeville, 1963

TRUE NORTH  
MAGNETIC NORTH  
APPROXIMATE MEAN DECLINATION, 1987

SCALE 1:250,000  
0 5 10 15 20 25 30 MILES  
0 5 10 15 20 25 30 KILOMETERS  
CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100-FOOT INTERVALS  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ARIZONA  
AREA OF MAP

PLACER GOLD DEPOSITS, CONTINENTAL EVAPORITE DEPOSITS, BASIN-HOSTED URANIUM DEPOSITS, AND GEOTHERMAL AREAS  
MINERAL RESOURCE ASSESSMENT OF THE AJO AND LUKEVILLE 1° BY 2° QUADRANGLES, ARIZONA  
By  
Jacelyn A. Peterson, Dennis P. Cox, and Floyd Gray  
1987

Simplified geologic map compiled by  
Floyd Gray, R.J. Miller, and M.J. Grubensky  
11200'