DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

BULLETIN 1713-C
PLATE 1

APPROXIMATE BOUNDARY OF FORT PIUTE WILDERNESS STUDY AREA (CDCA-267)

EXPLANATION

- Area of moderate resource potential
- Area with low resource potentail
- Mine with history of production

LEVELS OF RESOURCE POTENTIAL

- H High mineral resource potential
- M Moderate mineral resource potential
- L Low mineral resource potential
- U Unknown mineral resource potential

LEVELS OF CERTAINTY

- A Available data not adequate
- B Data indicate geologic environment, and suggest level of resource potential
- C Data indicate geologic environment, indicate resource potential, but do not establish activity of resource-forming processes
- D Data define geologic environment and level of resource potential and indicate activity of resource-forming processes in all or part of area

LEVEL OF RESOURCE POTENTIAL	A	B	C	D
UNKNOWN POTENTIAL	U/A	H/B HIGH POTENTIAL	H/C HIGH POTENTIAL	H/D HIGH POTENTIAL
		M/B MODERATE POTENTIAL	M/C MODERATE POTENTIAL	M/D MODERATE POTENTIAL
		L/B LOW POTENTIAL	L/C LOW POTENTIAL	L/D LOW POTENTIAL
				N/D NO POTENTIAL

LEVEL OF CERTAINTY

COMMODITIES

Au Gold

CORRELATION OF MAP UNITS

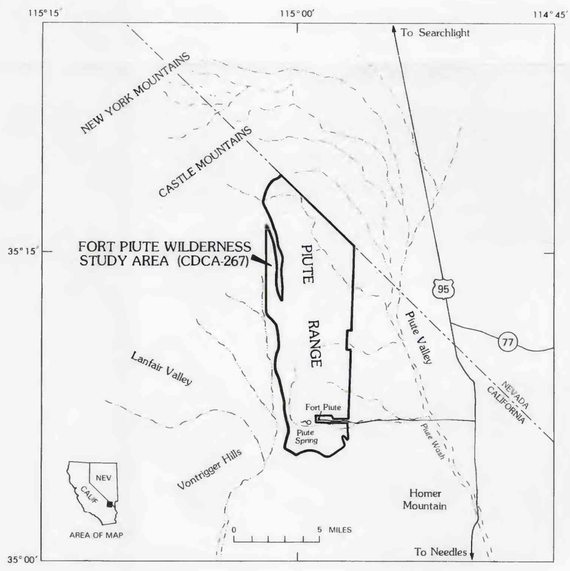
Qa	Holocene	QUATERNARY	CENOZOIC
QTp, QTs	Pleistocene		
	Pliocene (?)	TERTIARY	
Ti, Tvs, Tvsc	Miocene		
Mzg			MESOZOIC
Pag			PROTEROZOIC
Pgn			PROTEROZOIC(?)

DESCRIPTION OF MAP UNITS

- Qa **Alluvium (Holocene and Pleistocene)**—Alluvium, dissected older alluvium, and talus deposits of sand, pebbly sand, gravel, cobbles, and boulders
- QTp **Playa and pluvial lake deposits, undivided (Holocene to Pliocene?)**—Claystone, siltstone, sandstone, and pebbly sandstone
- QTs **Alluvial slope and stream deposits (Pleistocene and Pliocene?)**—Sandstone, siltstone, and conglomerate
- Ti **Igneous intrusions and flows (Miocene)**—Plugs, laccoliths, and associated flows of biotite dacite and biotite rhyodacite to rhyolite
- Tvs **Volcanic and sedimentary rocks of Piute Range (Miocene)**—Basal welded ash-flow tuff (Peach Springs Tuff of Young and Brennan, 1974) and sedimentary volcaniclastic breccia. Overlying flows and flow breccia of basaltic andesite, andesite, latite, dacite, rhyodacite, and rhyolite, interbedded with conglomerate, fanglomerate, sandstone, and siltstone
- Tvsc **Volcanic and sedimentary rocks of Castle Mountains (Miocene)**—Unit occurs only in the Castle Mountains. Basal unit equivalent in age to the Patsy Mine Volcanics (Longwell, 1963) and includes rhyolite ash-flow tuff, latite, quartz latite, and dacite flows and flow-breccia. Overlain by arkosic siltstone, sandstone, conglomerate, and a thin ash-flow tuff, equivalent to the tuff of Bridge Spring (Longwell, 1963). Capping units are rhyolitic air-fall tuff, tuff breccia, flows, and unwelded ash-flow units containing minor thin basaltic flows. Unit is intruded by abundant rhyolite plugs and local diabasic sills
- Mzg **Granitic rocks (Mesozoic)**—Leucogranite, hornblende-biotite granite, biotite quartz monzonite, granodiorite, and aplite dikes
- Pag **Augen gneiss (Proterozoic)**—Porphyroclastic to mega-porphyroclastic biotite-rich augen gneiss locally intruded by foliated to unfoliated garnet-bearing leucogranite
- Pgn **Mixed gneisses (Proterozoic?)**—Unit occurs only in the Castle Mountains. Foliated and compositionally layered high-grade metamorphic rocks, including garnet-mica gneiss, biotite-sillimanite gneiss, and amphibolite. As mapped, includes Tertiary leucocratic rhyolite intrusions lithologically identical to abundant flows and intrusions of the Castle Mountains

- Contact
- Fault - Dashed where approximate; dotted where concealed; bar and ball on downthrown side
- Low angle normal fault - Dashed where approximate
- Anticline - Showing trend of axis and direction of plunge
- Geochemical sample site - No anomalies
- (251) Geochemical sample site - Anomalies; number indicates sample site with anomalous concentrations, dominantly of Au

INDEX MAP



Base from U.S. Geological Survey 1:62,500
Lanfair Valley, Calif., 1956

SCALE 1:62500
1 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
1 5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

14° TRUE NORTH MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1986

NEV CALIF
AREA OF MAP

Geology by E. J. Nielson (1983-1985), J. S. Noller (1984-1985), R. D. Turner (1982-1984), and C. A. Ardito (1983-1984)

MINERAL RESOURCE POTENTIAL MAP OF THE FORT PIUTE WILDERNESS STUDY AREA, SAN BERNARDINO COUNTY, CALIFORNIA