

- EXPLANATION**
- AREA OF HIGH (H) RESOURCE POTENTIAL FOR VOLCANIC CINDERS (Vc)
 - AREA OF MODERATE (M) RESOURCE POTENTIAL FOR LEAD (Pb), ZINC (Zn), SILVER (Ag)
 - AREA OF LOW (L) RESOURCE POTENTIAL FOR COPPER (Cu); LEAD (Pb), ZINC (Zn), SILVER (Ag); OR SILICA (Si)
 - MINE OR BORROW PIT
 - PROSPECT OR CLAIM
 - MINERALIZED OUTCROP
 - EXPLORATORY DRILL HOLE
- Number refers to Table 1 in text
- GEOCHEMICAL SAMPLING SITE WITH ANOMALOUS CONCENTRATIONS OF ELEMENTS—Si, arsenic—mineral samples; Con, nonmagnetic heavy-mineral concentrate sample; anomalous elements shown in parentheses, followed by list of constituent minerals, if of importance**

CORRELATION OF MAP UNITS

Qa	QUATERNARY	CENOZOIC
Qtr	QUATERNARY	
Tv	TERTIARY	MESOZOIC
Jk	JURASSIC	
Pd1	PERMIAN TO DEVONIAN	PALEZOIC
Dca	DEVONIAN TO CAMBRIAN	

DESCRIPTION OF MAP UNITS

Qa SURFICIAL DEPOSITS (QUATERNARY)—Consists of alluvial, colluvial, lacustrine, eolian, playa, and tuff and caliche deposits.

Qtr FANGLACIOLITE (QUATERNARY AND TERTIARY)—Consists of consolidated to unconsolidated tilted fanlaciolites, with intercalated lacustrine deposits and basalt flows. Includes monolithologic breccias composed of sub-angular Paleozoic fragments in a clay- to sand-size matrix.

Tv VOLCANIC ROCKS (TERTIARY)—Olivine and quartz-olivine basalt flows, and pyroclastic tuff.

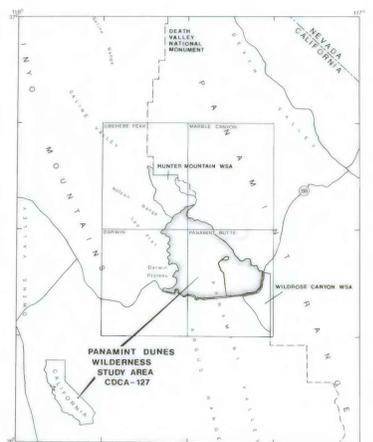
Jk GRANITIC ROCKS (JURASSIC)—Consists of the Hunter Mountain Quartz Monzonite and other coarse-grained diorite to alkalic bodies.

Pd1 LIMESTONE AND MINOR SHALE (PERMIAN TO DEVONIAN)—Thin- to medium-bedded blue-gray limestone and white marble, with minor intercalated shale, quartzite, and dolomite. Consists of the Owens Valley Formation (Permian), Keeler Canyon Formation (Permian to Permian), Lee Flat Limestone (Mississippian and Pennsylvanian?), Fossiliferous Formation (Mississippian), The Mountain Limestone (Mississippian), and Lost Burro Formation (Devonian).

Dca DOLOMITE WITH MINOR QUARTZITE (DEVONIAN TO CAMBRIAN)—Thin- to thick-bedded light- to dark blue-gray dolomite with minor quartzite, cherty dolomite, shale, and limestone. Consists of the Hidden Valley Dolomite (Silurian and Devonian), Dry Springs Dolomite (Ordovician), Bureau Quartzite (Ordovician), Pugnasp Group (Ordovician), Roper Formation (Cambrian), and Rosanna King Formation (Cambrian).

- CONTACT
- - - FAULT—Dashed where approximately located; dotted where concealed
- ▲ LEMMON THURST FAULT—Half-circles on upper plate
- ▲ THURST FAULT—Sawtooth on upper plate
- APPROXIMATE BOUNDARY OF WILDERNESS STUDY AREA

- LIST OF MINES, PROSPECTS, AND MINERALIZED OUTCROPS**
1. Happy Anniversary nos. 2 and 36 claims
 2. Big Four mine
 3. Apple 1 claim
 4. Panamint Valley dune field
 5. Green Quartz (hourglass) claim
 6. Mineralized outcrop
 7. A Flaccor no. 1 claims
 8. Unidentified prospect
 9. Mineralized outcrop
 10. Mineralized outcrop
 11. Sil from horizon pit NS 282
 12. Mineralized outcrop
 13. Mineralized outcrop
 14. Exploratory drill hole for saline minerals



Base from U.S. Geological Survey
Darwin, Ubehebe Peak, 1950;
Marble Canyon, Panamint Butte, 1951



SCALE 1:62,500
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Geology after Conrad and McKee (1984),
generalized by J. E. Conrad, 1984

This map is preliminary and has not
been reviewed for conformity with U.S.
Geological Survey editorial standards
and stratigraphic nomenclature

**MINERAL RESOURCE POTENTIAL MAP OF THE PANAMINT DUNES WILDERNESS STUDY AREA,
INYO COUNTY, CALIFORNIA**

By
George L. Kennedy, James E. Kilburn, and James E. Conrad
U. S. GEOLOGICAL SURVEY
and
Andrew M. Leszczykowski
U. S. BUREAU OF MINES