

- EXPLANATION**
- AREAS WITH MINERAL RESOURCE POTENTIAL**
- A1 - Low mineral resource potential for undiscovered magnesium sulfate (epsomite) and magnesium carbonate deposits as surface efflorescences or concealed concentrations. Low mineral resource potential for molybdenum in buried porphyry-type deposits
  - A2 - Moderate mineral resource potential for additional lead, zinc, copper, and silver in carbonate veins. Low mineral resource potential for molybdenum in buried porphyry-type deposits
  - A3 - Low mineral resource potential for gold and silver in hydrothermal veins or disseminated deposits, and for molybdenum in buried porphyry-type deposits
  - A4 - Moderate mineral resource potential for additional gold, silver, and copper in hydrothermal veins and disseminated in gouge zones
  - A5 - Moderate mineral resource potential for additional gold, silver, and copper in hydrothermal veins and disseminated in gouge zones. Low mineral resource potential for silver, lead, zinc, and possibly other base metals, in hydrothermal vein deposits
  - A6 - High mineral resource potential for additional iron and manganese in hydrothermal vein and replacement deposits

- MAP SYMBOLS**
- MINERAL RESOURCE POTENTIAL AREAS
  - HYDROTHERMALLY ALTERED AREAS

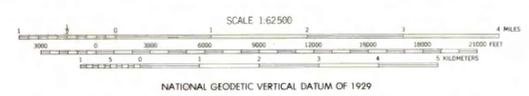
**CORRELATION OF MAP UNITS**

Qa	Qp	QUATERNARY			
TQoa	TQols	QUATERNARY AND TERTIARY			
Tai	Trdi	TERTIARY			
Tda	Ta	Tb	Tvc	Tts	TERTIARY
Mzad	Mzgd	Mzd	MESOZOIC		
mb	PRE-MESOZOIC (PRECAMBRIAN)				
pCgn	PRECAMBRIAN				

**DESCRIPTION OF MAP UNITS**

Qa	ALLUVIAL DEPOSITS (QUATERNARY) - Mainly deposits on fans and in intermittent stream channels
Qp	PLAYA DEPOSITS (QUATERNARY)
TQoa	FANGLOMERATE (QUATERNARY AND TERTIARY) - Consolidated to unconsolidated, commonly-tilted fanglomerates; composed predominantly of andesitic material
TQols	OLDER LAKE SEDIMENTS (TERTIARY AND QUATERNARY) - Bentonite and bedded lake sediments
Trdi	RHYOLITE AND DACITE PLUGS (TERTIARY) - Small, commonly strongly flow-foliated plugs of rhyolite and dacite
Tai	ANDESITE INTRUSIVE ROCK (TERTIARY) - Includes andesite, dacite, and minor basalt; mainly dikes and plugs
Tda	DACITE (TERTIARY) - Mainly lava flows and subvolcanic intrusions, with lesser pyroclastic rock
Ta	ANDESITE (TERTIARY) - Andesite and minor dacite lava flows with locally dominant agglomerate, tuff, and volcanic sandstone. Dominantly extrusive rock
Tb	BASALT (TERTIARY) - Mainly lava flows, minor pyroclastic rock. Locally includes andesite and basaltic andesite
Tvc	VOLCANIClastic DEPOSITS (TERTIARY) - Dominantly agglomerate composed of andesitic material; with intercalated andesite, basaltic andesite and dacite lava flows and volcanic sandstone and tuff
Tts	ALTERED TUFF AND TUFFACEOUS SEDIMENT (TERTIARY) - Massive and thinly layered, strongly desulfurized and altered tuff, lapilli tuff, and tuffaceous sandstone. Locally includes lithic wacke and arenite
Mzad	LEUCOCATIC ADAMELLITE (MESOZOIC) - Massive, dominantly homogeneous, medium- to coarse-grained, biotite adamellite; locally potassium-feldspar porphyritic
Mzgd	GRANODIORITE (MESOZOIC) - Massive fine-grained hornblende biotite granodiorite and adamellite
Mzd	QUARTZ DIORITE AND DIORITE (MESOZOIC) - Massive, fine-grained and medium-grained hornblende biotite quartz diorite and diorite. Medium-grained rocks commonly mildly altered
mb	MARBLE (pre-MESOZOIC, PRECAMBRIAN(?)) - Massive white-, tan-, and brown-weathering, fine-grained to medium-grained calcitic and dolomitic marble
pCgn	GNEISS (PRECAMBRIAN) - Finely foliated, fine-grained, biotite-quartz-plagioclase gneiss

Base from U.S. Geological Survey  
Confidence Hills, 1950, Leach Lake, 1948,  
Quail Mountains, 1948, Wingate Wash, 1950



Geology by J. Ach and R. Koch

## MINERAL RESOURCE POTENTIAL MAP OF THE OWLSHEAD MOUNTAINS WILDERNESS STUDY AREA, SAN BERNARDINO COUNTY, CALIFORNIA

By

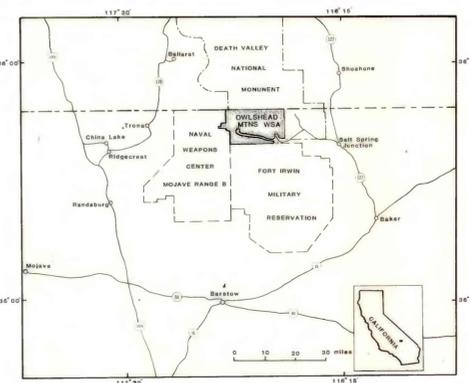
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U. S. GEOLOGICAL SURVEY

and

Arel B. McMahan, William L. Rice, and Michael Sokaski

U. S. BUREAU OF MINES



Index map showing location of Owl's Head Mountains Wilderness Study Area, (CICA-156), San Bernardino County, California.

**MINES, PROSPECTS, AND MINERALIZED OCCURRENCES**

M1	Kennedy Boys Mine	Zn,Pb,Cu,Ag,Au
M2	Unknown name prospect	Au,Ag
M3	Unknown name prospect	Au,Ag
M4	Unknown name prospect	Au,Ag
M5	Unknown name prospect	Au,Ag
M6	Unknown name prospect	Au,Ag
M7	Altered outcrop	
M8	Mineralized outcrop	Au,Ag
M9	Mineralized outcrop	Fe,Mn
M10	Black Magic Mine	Mn,Fe
M11	Mineralized outcrop	Au,Ag
M12	Ellie Iron Mine	Fe,Mn
M13	Mineralized outcrop	Fe,Mn
M14	Mineralized outcrop	Fe,Mn,Au,Ag
M15	Mineralized outcrop	Au,Ag
M16	Unknown name prospect	Mn,Fe
M17	Unknown name prospect	Au,Ag
M18	Unknown name prospect	Au,Ag
M19	New Deal Mine	Mn,Fe
M20	Unknown name prospect	St,Mn
M21	Unknown name prospect	Gypsum
M22	Owl Hole Mine	Mn
M23	Unknown name prospect	Bentonite Clay
M24	Unknown name prospect	Agate
M25	Mineralized outcrop	
M26	Mineralized outcrop	Ag,Au
M27	Burro Lake Prospect	Au,Ag
M28	Quail Spring Prospect	Au,Ag
M29	Boundary Prospect	Au,Ag
M30	Hidden Spring Prospect	Au,Ag,Cu
M31	Epsom Salt Mine	Epsom salt