



Base from U.S. Geological Survey, 1961
Reconnaissance and photogeology by
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SCALE 1:24 000
0 1/2 1 MILE
0 5 1 KILOMETER
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

WEST PART OF THE PRIEST TANK QUADRANGLE
MAPS SHOWING MOLYBDENUM DISTRIBUTION IN THE WINSTON AND
CHISE QUADRANGLES AND IN THE WEST PART OF THE PRIEST TANK
QUADRANGLE, SIERRA COUNTY, NEW MEXICO

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For sale by U.S. Geological Survey, price \$1.50 per set

- EXPLANATION
- Qal
Alluvium
- Qb
Late basalt flow
- Ts
Santa Fe Group as used by Kelley (1955)
Pediment alluvium, conglomerate, and volcanic
sediments; includes Palomas Gravel
- Tir
Intrusive rhyolite
Dominantly plugs and dikes
- Ti
Dike
Unknown composition
- Trt
Late rhyolite flows and ash-flow tuff
Medium gray; porphyritic, with phenocrysts of
quartz and sanidine; tin bearing
- Tim
Intrusive monzonite porphyry
Sills, dikes, and laccoliths
- Tl
Biotite latite and biotite-quartz latite tuff,
flows, and related breccia
- Tvr
Volcanic rocks
Eastern side of Black
Range and adjacent
areas
- Tr
Early rhyolitic tuff
Eastern side of Black
Range and adjacent
area
- Tal
Early andesite and subordinate latite flows,
flow breccia, tuff and agglomerate
- Pzr
Paleozoic rocks
Dominantly limestone of the Pennsylvanian
Magdalena Group and Permian red beds
- pCm
Precambrian metamorphic rocks

EXPLANATION

- QUATERNARY
- Contact
- Normal fault
Dashed where approximately located;
dotted where concealed; bar and ball
on downthrown side
- Lineament traced from aerial
photographs
- Strike and direction of dip of beds and foliation
- Quartz vein
- Molybdenum contents of three sample types (<80, M-1, NM-1) are
given at each sample locality. The <80 sample consists of
material finer than 0.177 mm sieved from the total stream
sediment. The other two sample types are the heavy portions
of concentrates panned from stream sediments and separated in
bromoform. The M-1 fraction is that portion of such material
not magnetic at 0.1 ampere, but magnetic at a 1.0-ampere setting
on a Franz Isodynamic Separator (forward slope 25°, side slope
15°). The portion that is not magnetic at a 1.0-ampere setting
is labeled NM-1.
- Present study
Stream-sediment sample
- Black Range sample
- Showing spectrographically determined molybdenum content in parts
per million. Top number is molybdenum value of the <80 fraction;
middle number, molybdenum value of the M-1 fraction; bottom
number, molybdenum value of the NM-1 fraction. N is molybdenum
below the detection limit. L is molybdenum detected below normal
sensitivity. A dash means no data on fraction shown. Filled
circle indicates sample locality at which the NM-1 fraction
contains at least 200 parts per million molybdenum. Lower detection
limit on molybdenum is 5 parts per million in rock and fine
stream-sediment samples; 10 parts per million in pan concentrates.
Histograms are shown accordingly. Black Range sample sites (Erickson
and others, 1970) shown by squares for parts of map area in which
published Black Range data are used. Top number, <80 fraction,
comparable to same fraction in present study. Lower value, pan
concentrated stream sediment with magnetite removed; approximately
comparable to M-1 fraction of present study. A dash means no data on
fraction shown.
- Isopleth
- Approximately delineating areas containing at least 10 parts per
million molybdenum in the NM-1 fraction of concentrated stream
sediments.

References
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Kelley, V. C., compiler, 1955, Geologic map of the Sierra County
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HISTOGRAMS SHOWING MOLYBDENUM DISTRIBUTION

