



Base from U.S. Geological Survey, 1961
Reconnaissance and photogeology by
H. V. Alminas and K. C. Watts

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 ZINC AND ANTIMONY DISTRIBUTION IN THE WINSTON AND
CHISE QUADRANGLES AND IN THE WEST PART OF THE PRIEST TANK
QUADRANGLE, SIERRA COUNTY, NEW MEXICO

By
Henry V. Alminas, Kenneth C. Watts, and David L. Siems
1973

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

New Mexico (Winston... Priest Tank quad.). Zinc and Antimony.
1:24,000. 1973.

Sheet 3,
cop. 1.



M(200)
MF-500
Sheet 3
c1

- EXPLANATION**
- QUATERNARY**
- Qal Alluvium
 - Qb Late basalt flow
 - Tsf Santa Fe Group as used by Kelley (1955)
Pediment alluvium, conglomerate, and volcanic
sediments; includes Palomas Gravel
 - Tir Intrusive rhyolite
Dominantly plugs and dikes
 - 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 areas
 - 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
 - p6m Precambrian metamorphic rocks
- TERTIARY**

Zinc and antimony (where detected) 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 **Black Range sample**

Stream-sediment sample

Showing spectrographically determined zinc or antimony content in
parts per million. Antimony values, shown in brackets, and a
filled triangle symbol are used only where antimony is detected
spectrographically. Top number in present study is zinc or an-
timony value of the <80 fraction; middle number, zinc or antimony
value of the M-1 fraction; bottom number, zinc or antimony value of
the NM-1 fraction. N is zinc or antimony not detected. L is
zinc or antimony 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 2,000 parts per million
zinc. Lower detection limit on zinc is 200 parts per million in
rock and fine stream-sediment samples; 500 parts per million in pan
concentrates. Histograms are shown accordingly. Only one histogram
is shown for antimony (total map area, NM-1 fraction) because of
infrequent detection in samples. Lower detection limits for anti-
mony are 100 parts per million in rocks and fine stream sediments;
200 parts per million in pan concentrates. Spectrographic detection
of antimony at these limits is considered anomalous. Black Range
sample sites (Erickson and others, 1970) are 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, zinc or antimony content of pan-concentrated stream
sediment with magnetite removed; approximately comparable to M-1
fraction of present study.

—500—
Isopleth
Approximately delineating areas containing at least 500 parts per
million zinc in the NM-1 fraction of concentrated stream sediments.

References
Erickson, G. E., and others, 1970, Mineral resources of the Black Range
Primitive Area, Grant, Sierra, and Catron Counties, New Mexico: U.S.
Geol. Survey Bull. 1319-E, p. 49-157.

Jahns, R. H., 1955, Road log in Sierra Cuchillo and neighboring areas
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Soc. Guidebook 6th Field Conf., south-central New Mexico, 1955:
p. 25-46, 158-174.

Kelley, V. C., compiler, 1955, Geologic map of the Sierra County region,
in New Mexico Geol. Soc. Guidebook 6th Field Conf., south-central
New Mexico, 1955: In pocket.

HISTOGRAMS SHOWING ZINC AND ANTIMONY DISTRIBUTION

