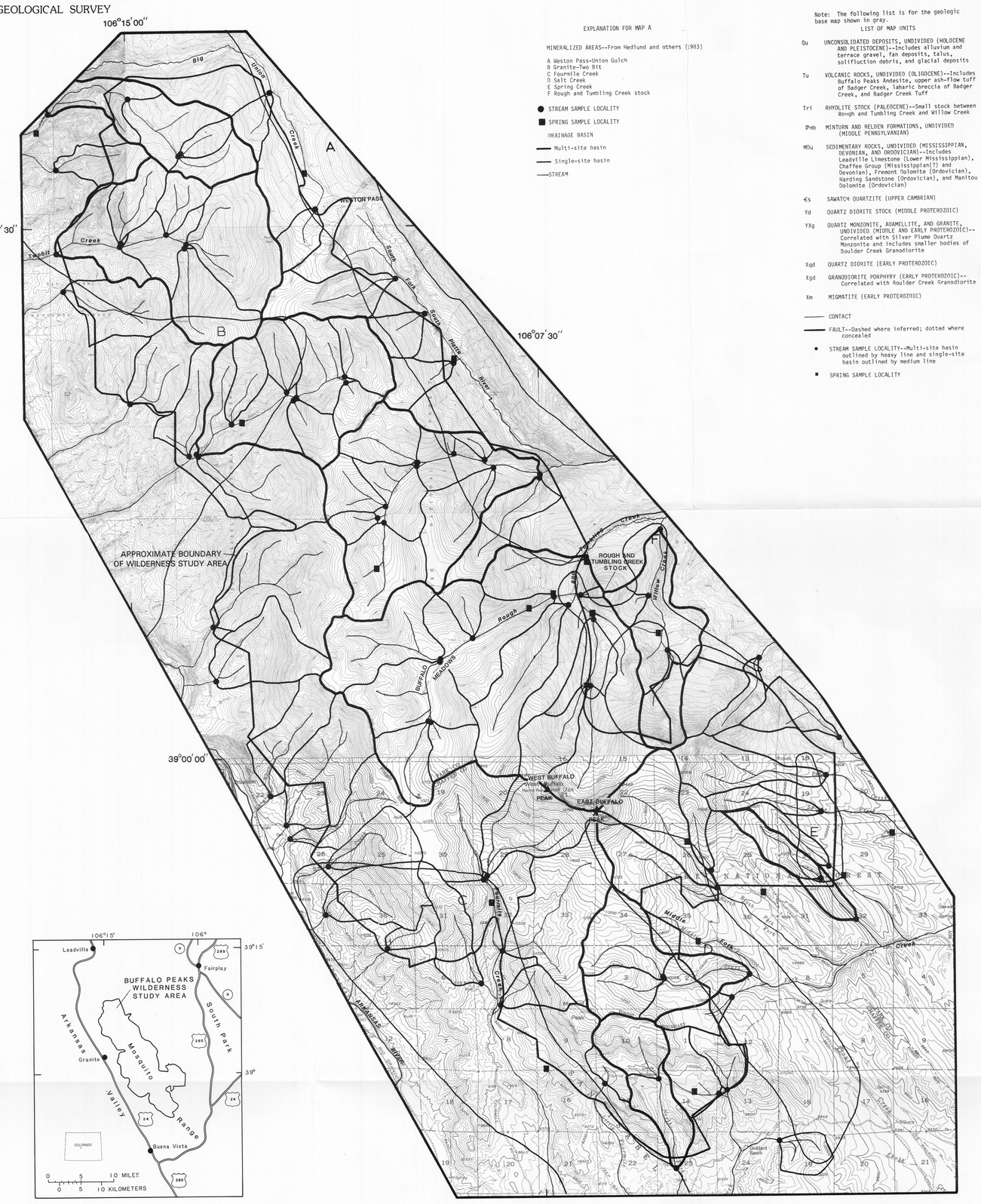


EXPLANATION FOR MAP A

MINERALIZED AREAS--From Hedlund and others (1983)

A Weston Pass-Union Gulch
B Granite-Two Bit
C Fourmile Creek
D Salt Creek
E Spring Creek
F Rough and Tumbling Creek stock

STREAM SAMPLE LOCALITY

SPRING SAMPLE LOCALITY

DRAINAGE BASIN

Multi-site basin

Single-site basin

STREAM

Note: The following list is for the geologic base map shown in gray.

LIST OF MAP UNITS

Qu	UNCONSOLIDATED DEPOSITS, UNDIVIDED (HOLOCENE AND PLEISTOCENE)--Includes alluvium and terrace gravel, fan deposits, talus, solifluction debris, and glacial deposits
Tu	VOLCANIC ROCKS, UNDIVIDED (OLIGOCENE)--Includes Buffalo Peaks Andesite, upper ash-flow tuff of Badger Creek, laharic breccia of Badger Creek, and Badger Creek Tuff
Tri	RHYOLITE STOCK (PALEOCENE)--Small stock between Rough and Tumbling Creek and Willow Creek
IPmb	MINTURN AND BELDEN FORMATIONS, UNDIVIDED (MIDDLE PENNSYLVANIAN)
MDu	SEDIMENTARY ROCKS, UNDIVIDED (MISSISSIPPIAN, DEVONIAN, AND ORDOVICIAN)--Includes Leadville Limestone (Lower Mississippian), Chaffee Group (Mississippian(?) and Devonian), Fremont Dolomite (Ordovician), Harding Sandstone (Ordovician), and Manitou Dolomite (Ordovician)
€s	SAWATCH QUARTZITE (UPPER CAMBRIAN)
Yd	QUARTZ DIORITE STOCK (MIDDLE PROTEROZOIC)
YXg	QUARTZ MONZONITE, ADAMELLITE, AND GRANITE, UNDIVIDED (MIDDLE AND EARLY PROTEROZOIC)--Correlated with Silver Plume Quartz Monzonite and includes smaller bodies of Boulder Creek Granodiorite
Xqd	QUARTZ DIORITE (EARLY PROTEROZOIC)
Xgd	GRANODIORITE PORPHYRY (EARLY PROTEROZOIC)--Correlated with Boulder Creek Granodiorite
Xm	MIGMATITE (EARLY PROTEROZOIC)

CONTACT

FAULT--Dashed where inferred; dotted where concealed

STREAM SAMPLE LOCALITY--Multi-site basin outlined by heavy line and single-site basin outlined by medium line

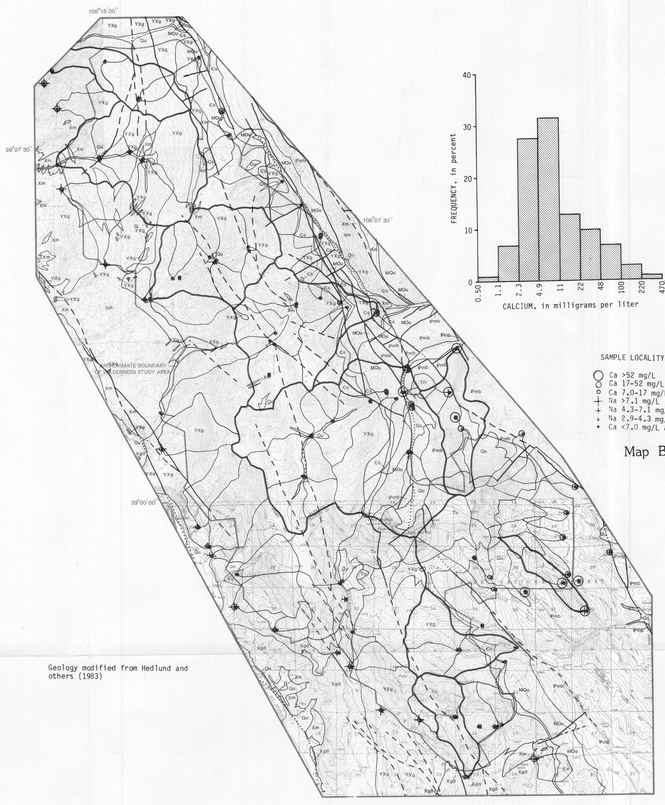
SPRING SAMPLE LOCALITY

INDEX MAP SHOWING BUFFALO PEAKS WILDERNESS STUDY AREA, COLORADO

Base from U.S. Geological Survey 1:24,000, Granite, 1967, Jones Hill, 1960, Leadville South, 1969, Mount Sherman and South Peak, 1961; 1:62,500, Buena Vista, 1955

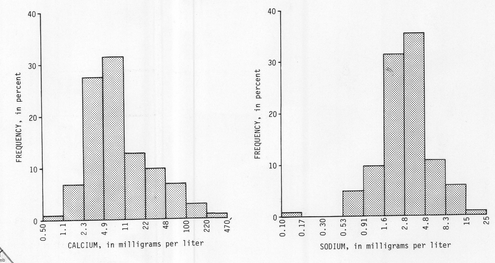
SCALE 1:50 000

Map A–Drainage basins, mineralized areas, and sample localities



Geology modified from Hedlund and others (1983)

SCALE 1:100 000

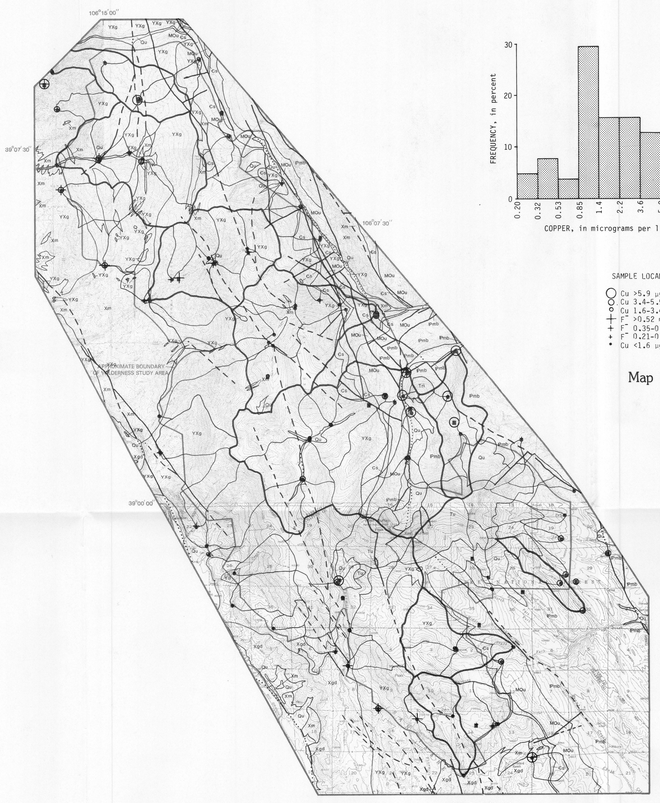


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Ca and Na

Ca >52 mg/L
Ca 17-52 mg/L
Ca 7.0-17 mg/L
Na >7.1 mg/L
Na 4.3-7.1 mg/L
Na 2.9-4.3 mg/L
Ca <7.0 mg/L and Na <2.9 mg/L

Map B–Calcium and sodium



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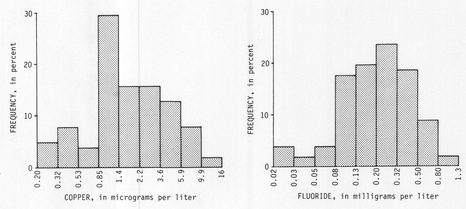
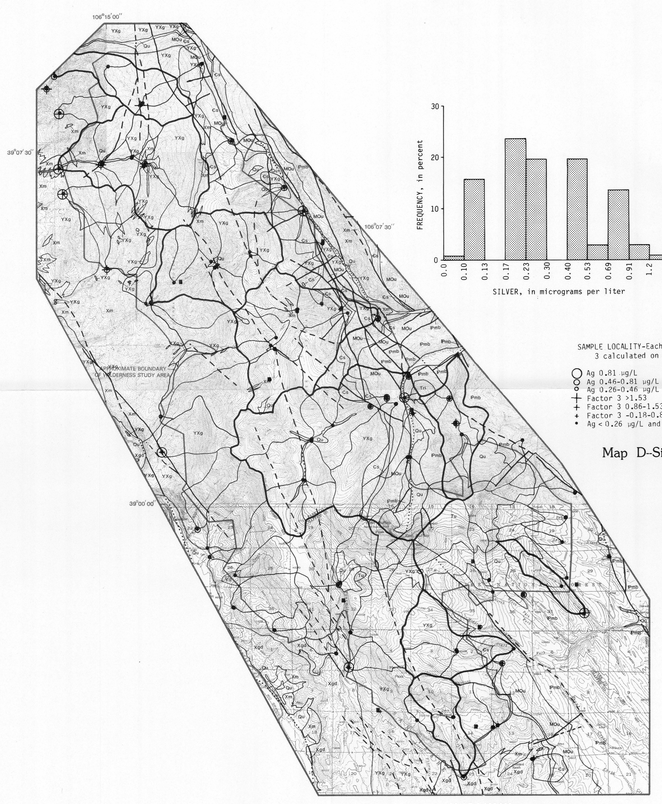


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Cu and F⁻

Cu >5.9 µg/L
Cu 3.4-5.9 µg/L
Cu 1.6-3.4 µg/L
F⁻ >0.52 mg/L
F⁻ 0.35-0.52 mg/L
F⁻ 0.21-0.35 mg/L
Cu <1.6 µg/L and F⁻ <0.21 mg/L

Map C–Copper and fluoride



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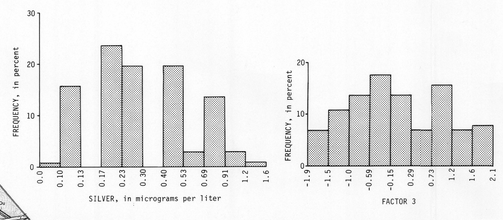
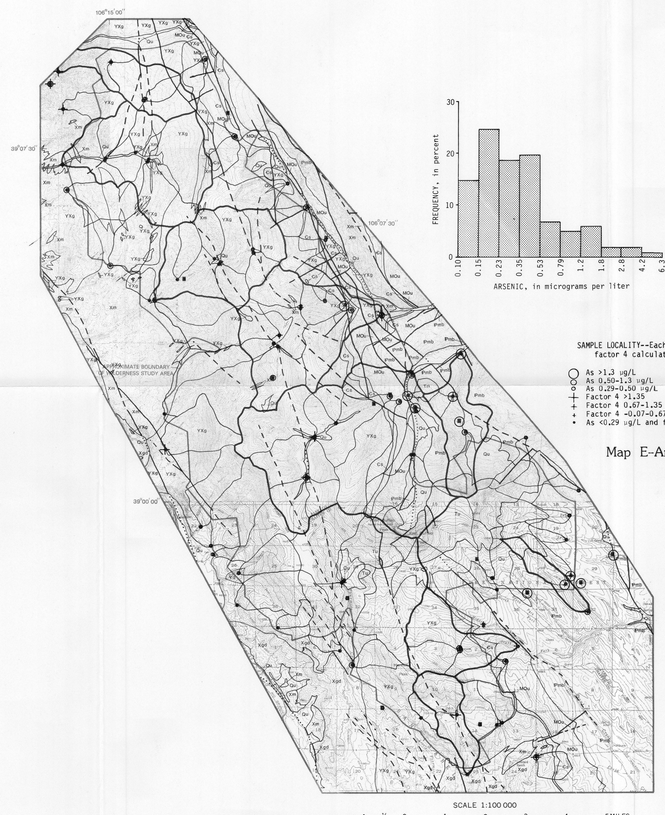


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Ag and factor 3 calculated on each sample

Ag 0.81 µg/L
Ag 0.46-0.81 µg/L
Ag 0.26-0.46 µg/L
Factor 3 >1.53
Factor 3 0.86-1.53
Factor 3 -0.18-0.86
Ag < 0.26 µg/L and factor 3 <-0.18

Map D–Silver and factor 3



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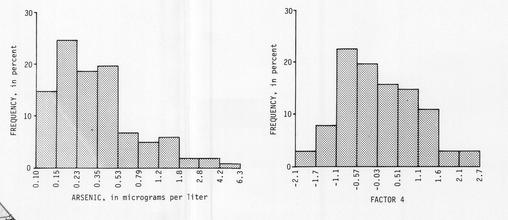
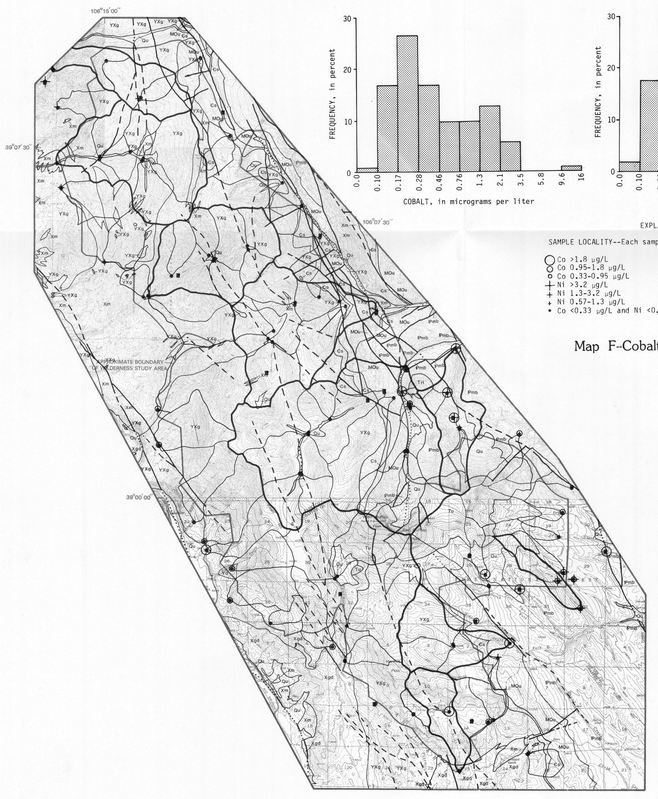


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for As and factor 4 calculated on each sample

As >1.3 µg/L
As 0.50-1.3 µg/L
As 0.29-0.50 µg/L
Factor 4 >1.35
Factor 4 0.67-1.35
Factor 4 -0.07-0.67
As <0.29 µg/L and factor 4 <-0.07

Map E–Arsenic and factor 4



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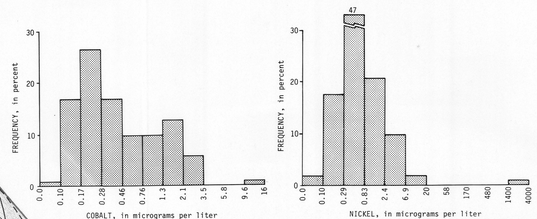
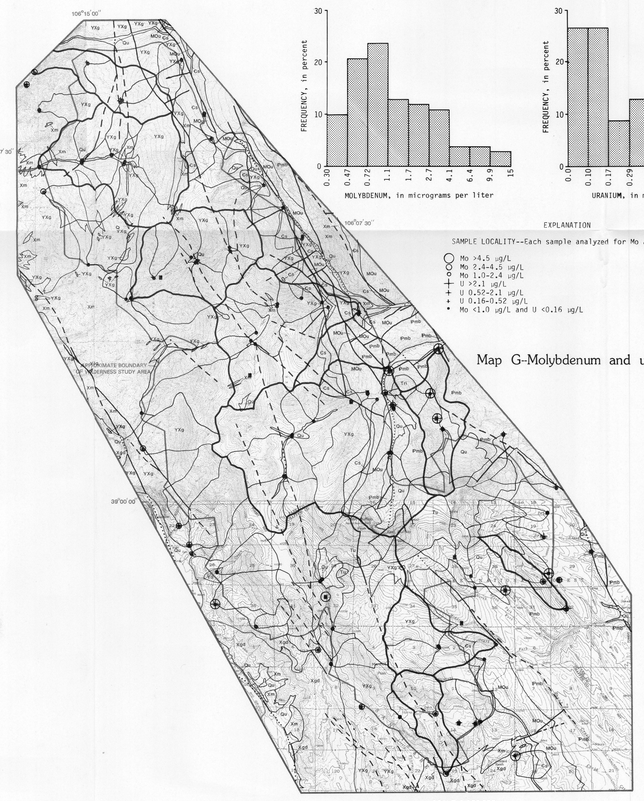


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Co and Ni

Co >1.8 µg/L
Co 0.95-1.8 µg/L
Co 0.33-0.95 µg/L
Ni >3.2 µg/L
Ni 1.3-3.2 µg/L
Ni 0.57-1.3 µg/L
Co <0.33 µg/L and Ni <0.57 µg/L

Map F–Cobalt and nickel



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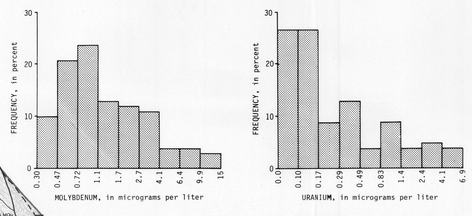
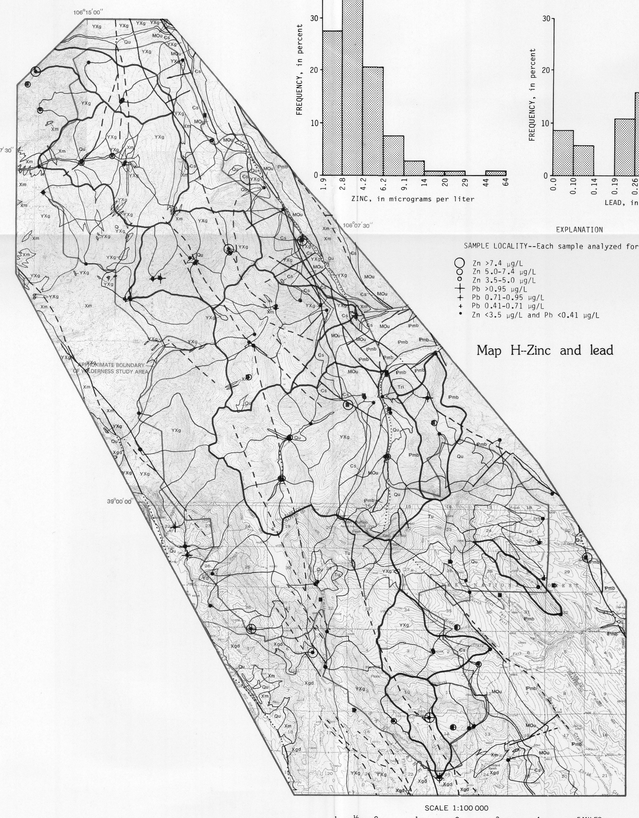


EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Mo and U

Mo >4.5 µg/L
Mo 2.4-4.5 µg/L
Mo 1.0-2.4 µg/L
U >2.1 µg/L
U 0.52-2.1 µg/L
U 0.16-0.52 µg/L
Mo <1.0 µg/L and U <0.16 µg/L

Map G–Molybdenum and uranium



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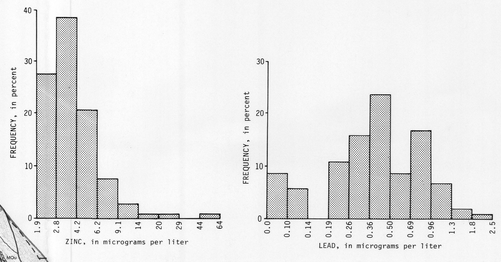

EXPLANATION

SAMPLE LOCALITY--Each sample analyzed for Zn and Pb

Zn >7.4 µg/L
Zn 5.0-7.4 µg/L
Zn 3.5-5.0 µg/L
Pb >0.95 µg/L
Pb 0.71-0.95 µg/L
Pb 0.41-0.71 µg/L
Zn <3.5 µg/L and Pb <0.41 µg/L

Map H–Zinc and lead

MAPS SHOWING WATER GEOCHEMISTRY OF THE BUFFALO PEAKS WILDERNESS STUDY AREA, LAKE, PARK, AND CHAFFEE COUNTIES, COLORADO

By
Gary A. Nowlan, Walter H. Ficklin, and Robert A. Dover

1985

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