DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN FILE 1971
NIOBIUM AND GOLD DISTRIBUTION
VICKS PEAK, STEEL HILL
BLACK HILL QUADRANGLES,
SOCORRO COUNTY, N. MEX.
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EXPLANATION

QUATERNARY

Qs — Surficial deposits

TERTIARY

Tir — Intrusive rhyolite

Tr — Younger rhyolite flows and ash flow tuffs

Tdla — Porphyritic latite and andesite flows, flow breccias, tuffs, and agglomerates

PALEOZOIC

Pz — Paleozoic, sedimentary rocks; undivided shale, sandstone, and limestone

This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards.

Contact

Normal fault
dashed where approximately located, dotted where covered

Lineament
traced from aerial photographs

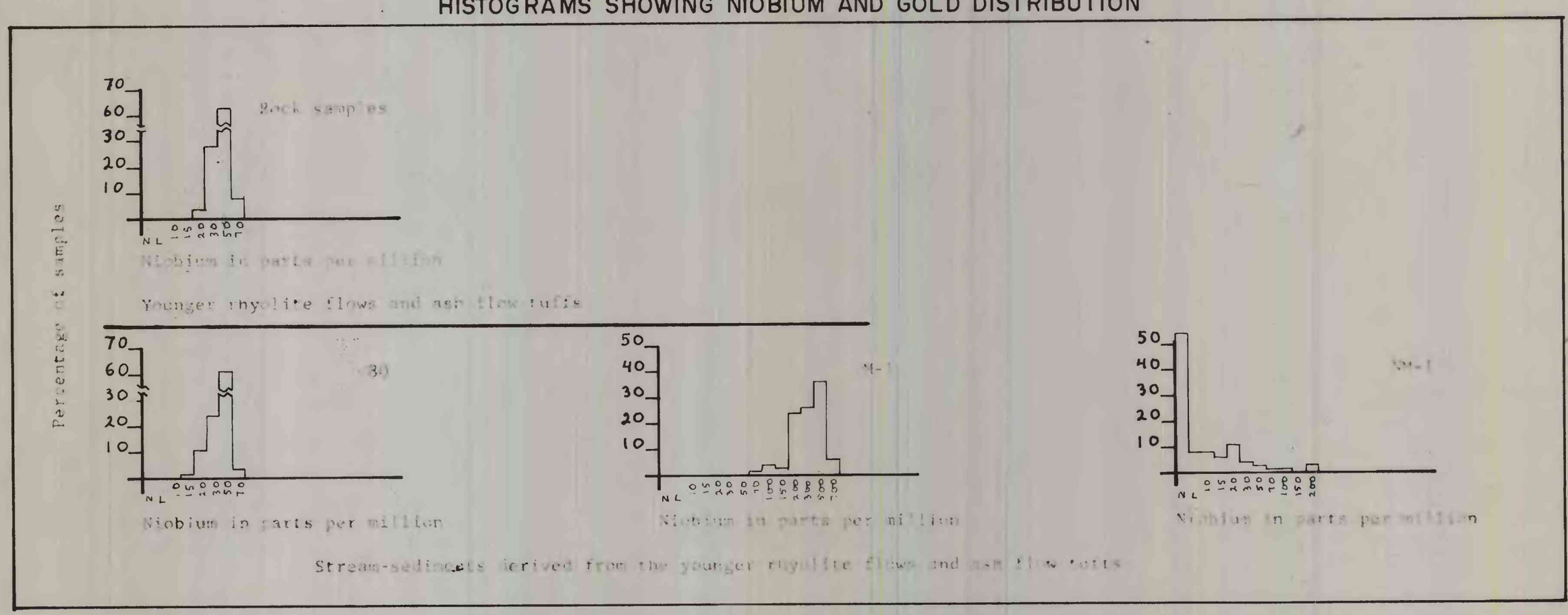
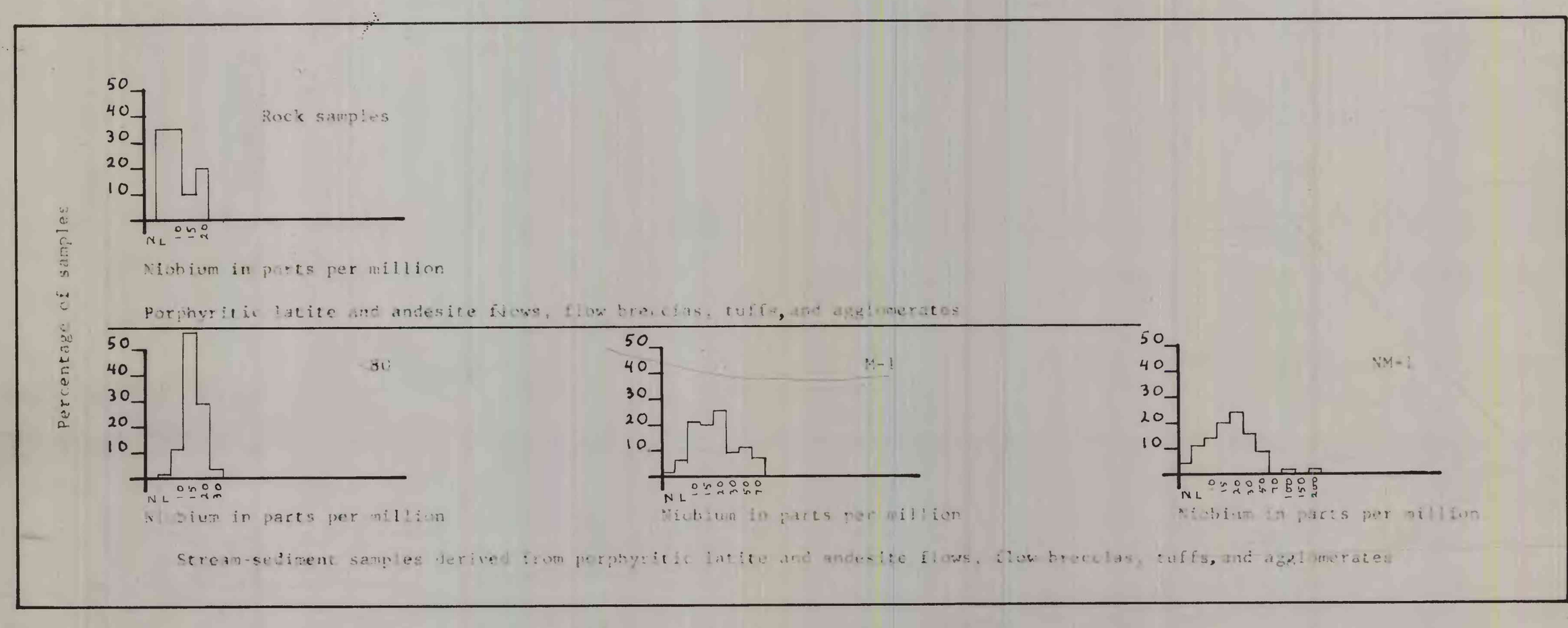
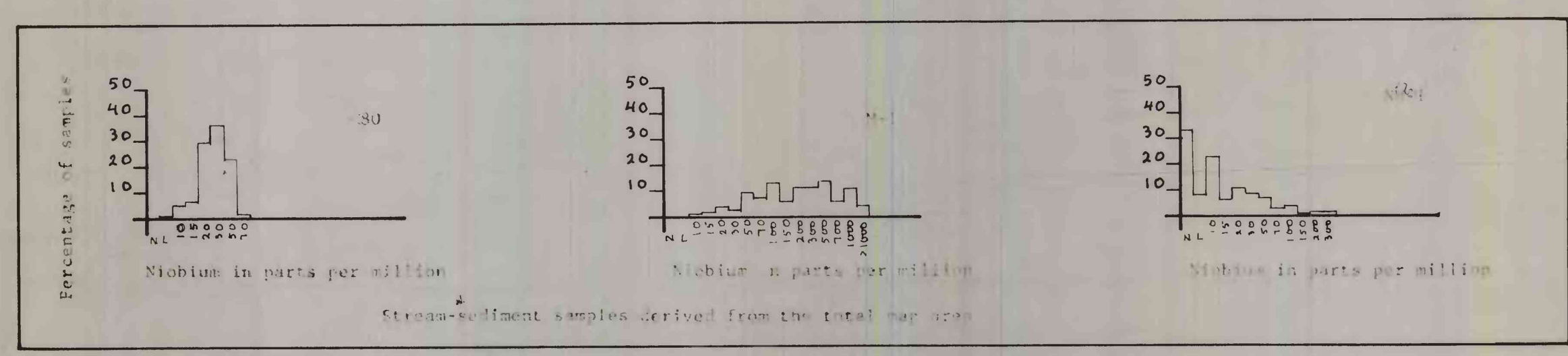
Metal contents of three sample types (<80, M-1, NM-1) are given at each sample location. The <80 sample consists of material finer than 0.177 mm sieved from the total stream sediment. The other two sample types are portions of stream-sediment panned concentrates with a specific gravity higher than that of 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 Frantz Isodynamic Separator (forward slope 25°, side slope 15°). The portion that is not magnetic at a 1.0-ampere setting is labeled NM-1

15
150
N

20
200
50
N
N
50

Stream-sediment sample
showing spectrographically determined niobium and gold contents in parts per million. Numbers without brackets give niobium values. Top number, niobium value of the <80 fraction; middle number, niobium value of the M-1 fraction; bottom number, niobium value of the NM-1 fraction. L, niobium detected but below 10 parts per million. N, niobium value below the detection limit. Dash, missing value. Numbers in brackets give gold values of the three fractions in the above mentioned sequence. L, gold detected but below 10 parts per million. N, gold value below detection limit. Brackets are found only near sample locations at which gold was detected spectrographically. Cross overlay indicates gold was seen in the concentrate. Filled circle indicates that gold was detected spectrographically and/or visually at that location

500

Contour
approximately delineating areas containing at least 500 parts per million niobium in the NM-1 fraction of stream sediments

HISTOGRAMS SHOWING NIOBIUM AND GOLD DISTRIBUTION