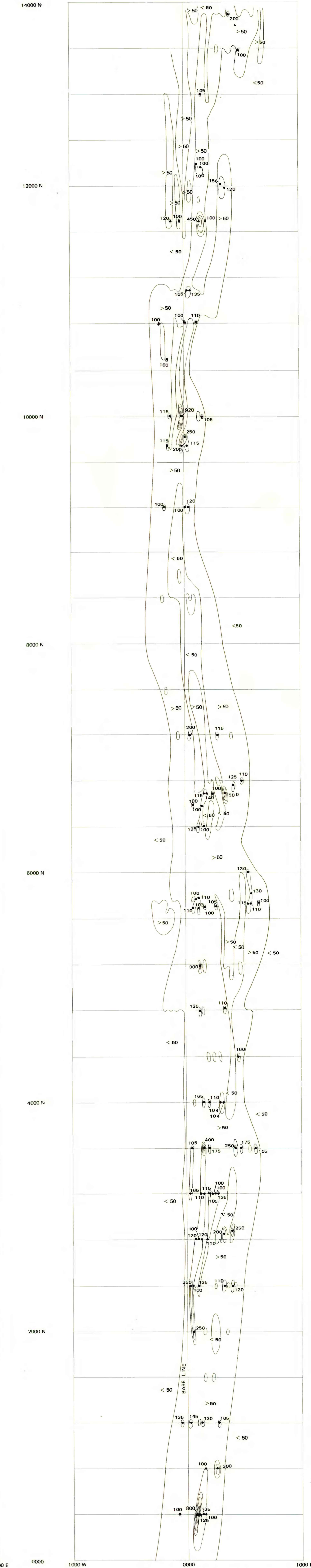
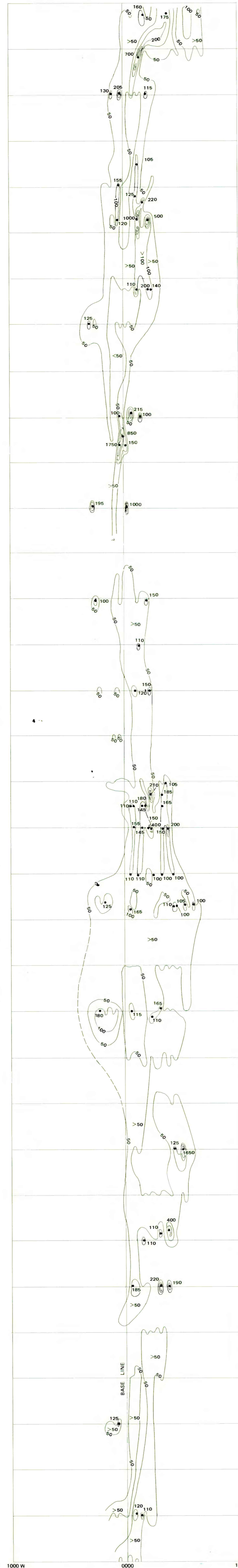


- EXPLANATION**
- WADI SEDIMENTS
  - Qal QUATERNARY ALLUVIUM
  - Qb QUATERNARY BASALT--Columnar-jointed, gray-black, massive. Olivine and augite phenocrysts and calcite-zeolite-lined vesicles
  - df HORNBLende DIORITE--Medium- to coarse-grained, green and white; syntectonic. Equal proportions of hornblende and feldspar. Later segregations of hornblende (h)
  - d SILTY LIMESTONE--Both calcitic and dolomitic, buff to brown (d) with minor shale component. Interbeds of cherty iron-manganese (---, cim), chert (-----), and cherty gossan (—)
  - cgs UPPER SHALE--Calcareous and graphitic. Well cleaved, green gray, medium to fine grained. Graphite-rich horizons toward top of unit
  - dtl DACITE AND ANDESITE--Light-gray-green to green, fine- to medium-grained tuffs and flow rocks with irregularly developed cleavage
  - dal DACITE AND ANDESITE FLOW ROCKS--Vitric, fine-grained, green and gray-green. Pyroxene and olivine phenocrysts and quartz-feldspar-filled vesicles. Local agglomerate beds
  - us UPPER ANDESITE--Dark-green tuffs and lavas
  - pd PYROXENE DACITE--Green to gray-green tuffs and flow rocks with strong cleavage and containing stubby phenocrysts of pyroxene and ubiquitous grains of pink feldspar
  - ls LOWER SHALE--Green, gray, and purple siltstone, shale, and mudstone. Interbedded chert (-----) near base
  - la LOWER ANDESITE--Green to dark-green, fine- to coarse-grained tuffs and flow rocks. Homogeneous in texture and composition
  - CONTACT--Dashed where approximately located
  - FAULT
  - CHERTY LAYER--Locally bearing gossans and oxidized copper. Dashed where approximately located
  - ANTICLINAL FOLD
  - SYNCLINAL FOLD
  - STRIKE AND DIP OF LAYERING
  - STRIKE AND DIP OF CONTACT
  - DIRECTION AND PLUNGE OF LINEATION
  - WADI
  - ANCIENT MINE
  - GRID LINE--Used for geophysical and geochemical surveying and geologic mapping
  - DIAMOND DRILL HOLE LOCATION AND NUMBER--Dashed line indicates horizontal projection of drill hole
  - DIRT ROAD
  - BUILDING OR ANCIENT RUINS

**GEOCHEMICAL MAP EXPLANATION**

ROCK SAMPLE LOCALITY--Geochemical data provided for selected samples, in parts per million

GEOCHEMICAL DATA CONTOUR--Both zinc and copper data contoured at 50, 100, 200, and 300 parts per million. Dashed where approximately located



**GEOLOGIC AND GEOCHEMICAL MAPS OF THE B-13 ANOMALY AREA, NORTHERN WADI BIDADH DISTRICT, KINGDOM OF SAUDI ARABIA**  
 1983

GEOCHEMICAL MAP SHOWING COPPER DISTRIBUTION, B-13 ANOMALY AREA

GEOCHEMICAL MAP SHOWING ZINC DISTRIBUTION, B-13 ANOMALY AREA