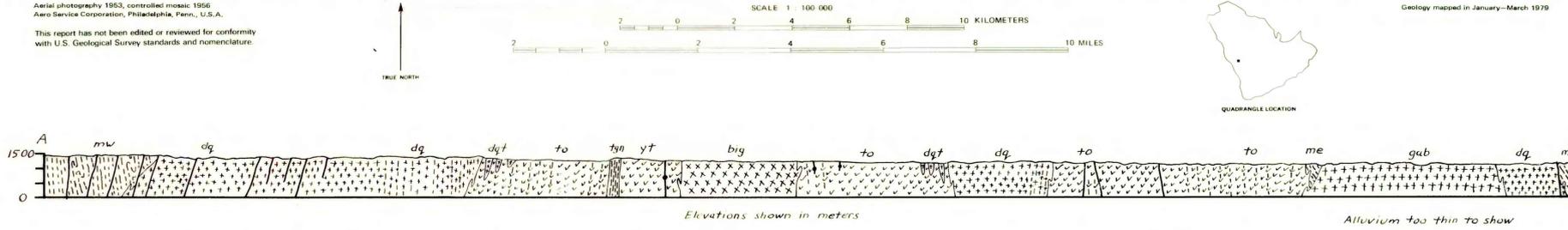


- DESCRIPTION OF MAP UNITS**
- Qa ALLUVIUM
 - Metabasalt and meta-andesite dikes
 - ggd GRAPHIC GRANITE AND RHYOLITE--Pink and gray, medium-grained granite grading into very fine grained rhyolite; composed of slightly perthitic potassium feldspar, quartz, and plagioclase with traces of hornblende, sphene, and opaque minerals and locally alkali amphibole
 - bg BIOTITE GRANITE--Pink, coarse-grained granite composed of perthitic potassium feldspar, quartz, plagioclase, and biotite with traces of zircon, sphene, and opaque minerals
 - bigq TWO-MICA GRANITE--Pink to white, coarse-grained granite composed of potassium feldspar, quartz, and plagioclase with traces of muscovite, biotite, zircon, and opaque minerals and locally garnet; q, quartz
 - gab GABBRO--Light- to dark-gray, medium- to very coarse grained; composed of plagioclase, olivine, clinopyroxene, hornblende, and opaque minerals and locally biotite
 - dg DIORITE AND GABBRO--Light-gray and black, coarse-grained; diorite is composed of plagioclase, hornblende, and epidote; gabbro is composed of plagioclase, olivine, clinopyroxene, actinolite, hornblende, and opaque minerals
 - yt KHALIJ TONALITE AND QUARTZ DIORITE--Pink, altered, medium- to coarse-grained; crosscuts rocks of the tonalite gneiss belt
 - tgn TONALITE GNEISS--Light- to dark-gray, fine- to medium-grained cataclastic tonalite composed of plagioclase, quartz, and hornblende with traces of biotite and opaque minerals
 - to TONALITE AND QUARTZ DIORITE--Light-gray to black and white, medium- to coarse-grained, commonly foliate; composed of plagioclase, quartz, hornblende, and biotite with traces of sphene and opaque minerals. Locally altered, pink, and containing chlorite and epidote
 - dq DIORITE AND QUARTZ DIORITE--Dark-gray to black and light-gray, fine- to coarse-grained rocks of irregular texture, commonly sheared and fractured; composed of plagioclase and hornblende, and locally quartz, with traces of opaque minerals
 - tog TONALITE AND GRANITE--Tonalite and quartz diorite unit mixed with graphic granite and rhyolite unit
 - dqg DIORITE AND GRANITE--Diorite and quartz diorite unit mixed with graphic granite and rhyolite unit
 - dqt DIORITE AND TONALITE--Diorite and quartz diorite unit mixed with tonalite and quartz diorite unit
 - meg METAVOLCANIC ROCKS OF EASTERN BELT AND GRANITE--Metavolcanic rocks mixed with graphic granite and rhyolite unit
 - mcd METAVOLCANIC ROCKS OF CENTRAL BELT AND DIORITE--Metavolcanic rocks mixed with diorite and quartz diorite unit
 - mwt METAVOLCANIC ROCKS OF WESTERN BELT AND TONALITE--Metavolcanic rocks mixed with tonalite and quartz diorite unit
 - mwd METAVOLCANIC ROCKS OF WESTERN BELT AND DIORITE--Metavolcanic rocks mixed with diorite and quartz diorite unit
 - mm MARBLE, METASEDIMENTARY, AND METAVOLCANIC ROCKS--White, almost pure carbonate marble interlayered with gray metasediments; includes quartz-plagioclase granulite with minor epidote, biotite, chlorite, sphene, and opaque minerals
 - qz QUARTZITE--Light-gray, fine- to medium-grained quartzite with minor hornblende, biotite, garnet, and opaque minerals
 - ml LAYERED METAVOLCANIC ROCKS--Interlayered brownish-gray metadacite and dark-gray to greenish-gray meta-andesite and metabasalt
 - me METAVOLCANIC ROCKS OF EASTERN BELT--Dark-gray to black, fine- to medium-grained meta-andesite, metabasalt, and amphibolite
 - mc METAVOLCANIC ROCKS OF CENTRAL BELT--Medium- to dark-gray and greenish-gray, fine-grained meta-andesite and metabasalt with local marble
 - mw METAVOLCANIC ROCKS OF WESTERN BELT--Greenish- to brownish-gray meta-andesite and metadacite flow rocks and tuffs, less common metabasalt and meta-rhyodacite
- SYMBOLS**
- CONTACT
 - - - FAULT--Dotted where concealed
 - TREND LINES--strike of foliation or layering as observed on aerial photographs
 - STRIKE AND DIP OF BEDS
 - 60° Inclined
 - + Vertical
 - 80° STRIKE AND DIP OF FOLIATION
 - 60° Inclined
 - + Vertical
 - ⌘ ANCIENT COPPER MINE
 - VILLAGE



RECONNAISSANCE GEOLOGIC MAP OF THE THANIAH QUADRANGLE, SHEET 20/42 C, KINGDOM OF SAUDI ARABIA

by
Robert C. Greene
 1983

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

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