

EXPLANATION

- gp**
Alkaline granite
Red and pink to brown and black and peralkalic
granite. Occurs in circular plugs and stocks.
Age 550-590 million years from Rb/Sr isotope ratios
 - gm**
Alkaline granite
Gray and reddish alkaline granite; commonly sheared and
gneissic
 - mu**
Murdama formation
Greywacke, siliceous slate, quartzite and phyllite;
locally cross-bedded, sheared, folded and metamorphosed;
includes interbedded acidic volcanics, locally meta-
morphosed to tuffaceous schists of quartz, sericite,
chlorite and biotite types
 - gh**
Gray biotite granite
Gray to reddish-gray, medium- to coarse-grained,
biotite granite that grades to granodiorite; locally
porphyritic; locally dioritic.
 - hc/hc**
Halawan formation
Andesite, locally felsitic, agglomerate, concretionary,
quartzite, greywacke, locally interbedded schists
and phyllite; sheared and folded, locally discordant
andesite, minor acidic extrusives, epidiorite, diorite,
diabase, gabbro, and serpentinite, etc.
 - 99**
Granite, generally gneissic, sheared granite; includes
intrusions of younger granite dikes and plugs;
epidioritic xenoliths, locally localized, of
older rocks are common. Age one billion years
from Rb/Sr isotope ratios
- Letters indicate lithology of dikes; A - andesite-like,
Al - andesite-like, R - rhyolite, B-A - breccia-
andesite
- Shows an alignment that is visible on aerial
photographs; usually, dikes, or other planar features
forming linear belts
- Contact
Dashed where approximately located
- Fault
Dashed where approximately located
- Lineament
Possibly a fault but no evidence except an alignment
of erosional features on aerial photographs that
is commonly visible in the field
- | | | |
|--------------------|-----------------|-----------------|
| ● 20 or less | W less than 200 | ■ 2 or less |
| ○ 50, or 70 | W 200 or more | □ 3, 5, or 7 |
| ● 100, 150, or 200 | W 100 or less | ■ 10, 15, or 20 |
| — COPPER | ▲ 100 or less | ■ MOLYBDENUM |
| | ▲ ZINC | |
- Symbols and contents in parts per million for copper,
zinc, and molybdenum in samples analysed spectrographically
and for tungsten in concentrates analysed classically.
Copper symbol is station location
- AB
A
ABH
- ◆ Schaeelite and/or powellite in sample of sand
- Fe 10
Pb 10
Sn 10
- Anomalous elements and content in parts per million in sand
- Ag - silver, Be - beryllium, Cr - chromium,
Nb - niobium, Ni - nickel, Fe - iron, Sn - tin
Ti - titanium, V - vanadium
- 11,970 11,970
Sample stations and numbers



AERIAL PHOTOGRAPHY 1955 AND CONTROLLED MOSAIC 1956
AERO SERVICE CORP., PHOTOGRAMMETRIC ENGINEERS
PHILADELPHIA 20, PENNSYLVANIA, U. S. A.

GEOLOGY
ORIGINAL BY: ROY O. JACKSON, RICHARD G. BOGUE,
GLEN F. BROWN, AND RUEL D. GIERHART: U. S.
GEOLOGICAL SURVEY, 1963
MODIFIED BY: JESSE W. WHITLOW: U. S.
GEOLOGICAL SURVEY, 1966

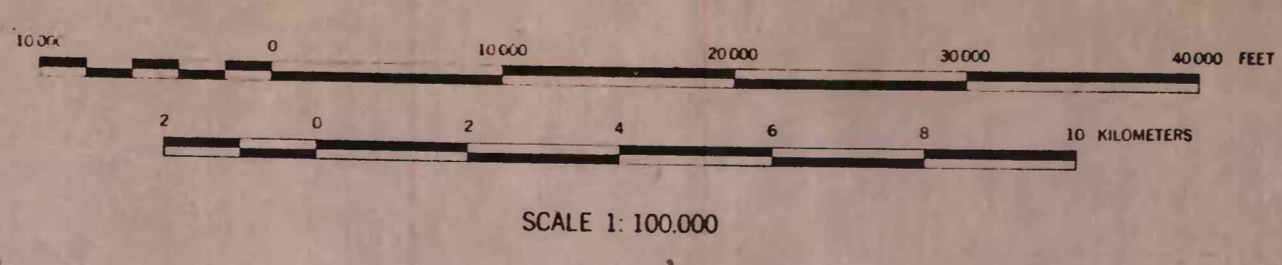
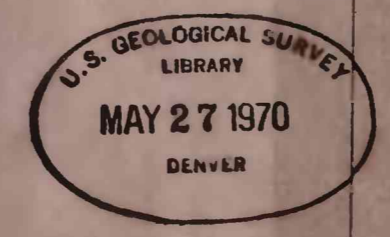


FIGURE 2. GEOLOGIC MAP SHOWING SAMPLE LOCATIONS FOR A MINERAL SURVEY
OF THE JABAL SAHAH QUADRANGLE, KINGDOM OF SAUDI ARABIA

BY
JESSE W. WHITLOW
1966

PLEASE REPLACE IN POCKET
IN BACK OF BOUND VOLUME



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

PRECAMBRIAN