Aerial photography 1955 and controlled mosaic 1959
Aero Service Corporation, Philadelphia Penn., U.S.A.

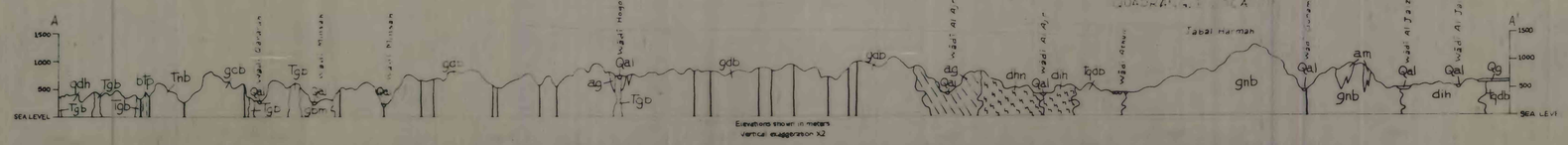
SCALE 1:100,000

10 KILOMETERS

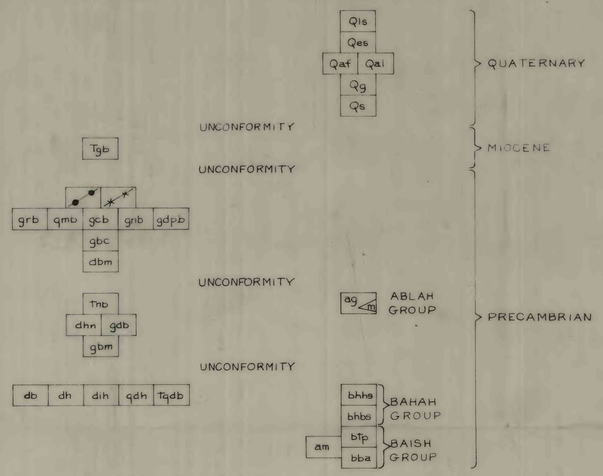
10 MILES

TRUE NORTH

Geology mapped by D. G. Hadley during 1974




## CORRELATION OF MAP UNITS




## DESCRIPTION OF MAP UNITS

### INTRUSIVE ROCKS

- Tgb — GABBRO DIKES
- GRANITE DIKES
- MAFIC DIKES—Composed of basalt, andesite, and diabase
- grb — GRANITE AND QUARTZ MONZONITE—Biotite rich
- qmb — QUARTZ MONZONITE—Abundant biotite
- gcb — GRANITE—Coarse grained, biotite rich
- gnb — GRANITE AND QUARTZ MONZONITE—Biotite rich
- gdpb — GRANODIORITE—Porphyritic, biotite rich
- gbc — GABBRO—Coarse grained
- dbm — METADIORITE—Biotite rich
- Tnb — TONALITE AND GRANODIORITE
- dhn — DIORITE—Hornblende rich
- gdb — GRANODIORITE AND GRANITE—Biotite rich
- gbm — METAGABBRO
- db — DIORITE—Biotite rich
- dh — DIORITE—Abundant hornblende
- dih — DIORITE—Hornblende rich
- qdh — QUARTZ DIORITE AND DIORITE
- Tqdb — TONALITE AND QUARTZ DIORITE

### SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

- Qls — EOLIAN LINEAR SAND RIDGE
- Qes — EOLIAN SAND DUNE FIELDS
- Qaf — WADI FLOOD PLAIN SILT DEPOSITS
- Qal — ALLUVIAL SAND AND GRAVEL
- Qg — ESCARPMENT BOULDER AND GRAVEL DEPOSITS
- Qs — PEDIMENT AND PLAINS SAND, GRAVEL, AND SILT DEPOSITS

ABLAH GROUP

- ag — Amphibolite, graphite, staurolite, hornblende, and biotite schist, kyanite quartzite, and marble

BAHAH GROUP

- bhhs — Hornblende schist
- bhbs — Biotite schist

BAISH GROUP

- bTp — Volcaniclastic rocks and subordinate interbedded basalt and andesite
- bba — Basalt, andesite, and subordinate interbedded volcaniclastic rocks
- am — AMPHIBOLITE

CONTACT

FAULT

ANTICLINE OR ANTIFORM—Showing crestline and plunge

Plunging

DOME

SYNCLINE OR SYNFORM—Showing troughline and plunge

Plunging

Minor

STRIKE AND DIP OF BEDS—Top not implied

45 Inclined

STRIKE AND DIP OF FOLIATION OR SCHISTOSITY

50 Inclined

55 Inclined, lineation plunges parallel to strike of foliation

40 60 20 Inclined, lineation plunges oblique to strike of foliation

Vertical

Vertical, lineation horizontal

BEARING AND PLUNGE OF LINEATION

25 Inclined

Vertical

TREND LINES—Observed on aerial photographs; may be bedding, foliation, or dikes

703× SPOT ELEVATION—In meters

853±72 / 743·5K RADIOMETRIC AGE AND SAMPLE NUMBER—In millions of years

JABAL 'AFAF QUADRANGLE
D G HADLEY AND R J FLECK

# RECONNAISSANCE GEOLOGY OF THE JABAL 'AFAF QUADRANGLE, SHEET 20/40 D, KINGDOM OF SAUDI ARABIA

by
Donald G. Hadley and Robert J. Fleck

1979