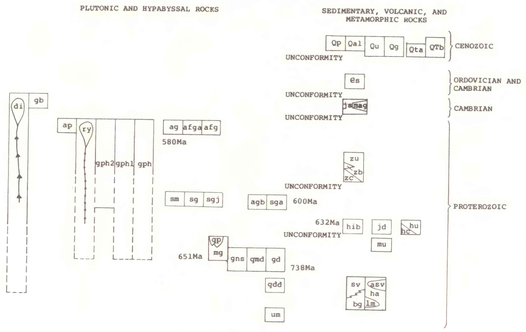
CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

CENOZOIC SEDIMENTS AND VOLCANIC ROCKS

- Qp — PLAYA LAKE DEPOSITS
- Qal — ALLUVIUM
- Qu — UNDIVIDED QUATERNARY DEPOSITS
- Qg — PEDIMENT GRAVEL
- Qtg — TERRACE GRAVEL
- QTb — CENOZOIC BASALT

PALEOZOIC SEDIMENTARY ROCKS

- Єs — SIQ SANDSTONE

LATE PROTEROZOIC TO EARLY PALEOZOIC VOLCANIC AND SEDIMENTARY ROCKS

- js, Mag — JIBALAH GROUP Undivided Jibalah Group (js) and magnesite (mag)

PRECAMBRIAN VOLCANIC AND SEDIMENTARY ROCKS

- zu, zb, zc — ZARGHAT FORMATION--Mixed volcanic and sedimentary rocks (zu); basalt (zb); conglomerate (zc).
- hib — HIBSHI FORMATION
- jd — JURDHAWIYAH GROUP
- hu, hc — HADN FORMATION--Undivided silicic volcanic rocks and sedimentary rocks (hu), and sandstone and conglomerate (hc)
- mu — MARAGHAN FORMATION
- HULAYFAH GROUP
  - sv — Sufran formation
  - bg — Banana formation
  - ha, asv, lm — Afna formation--Volcanic and sedimentary rocks, undivided (ha); sedimentary member (asv); limestone and marble member (lm).

LATE PRECAMBRIAN TO EARLY PALEOZOIC INTRUSIVE ROCKS

- di — DIABASE DIKES AND PLUGS
- gb — GABBRO

PRECAMBRIAN INTRUSIVE ROCKS

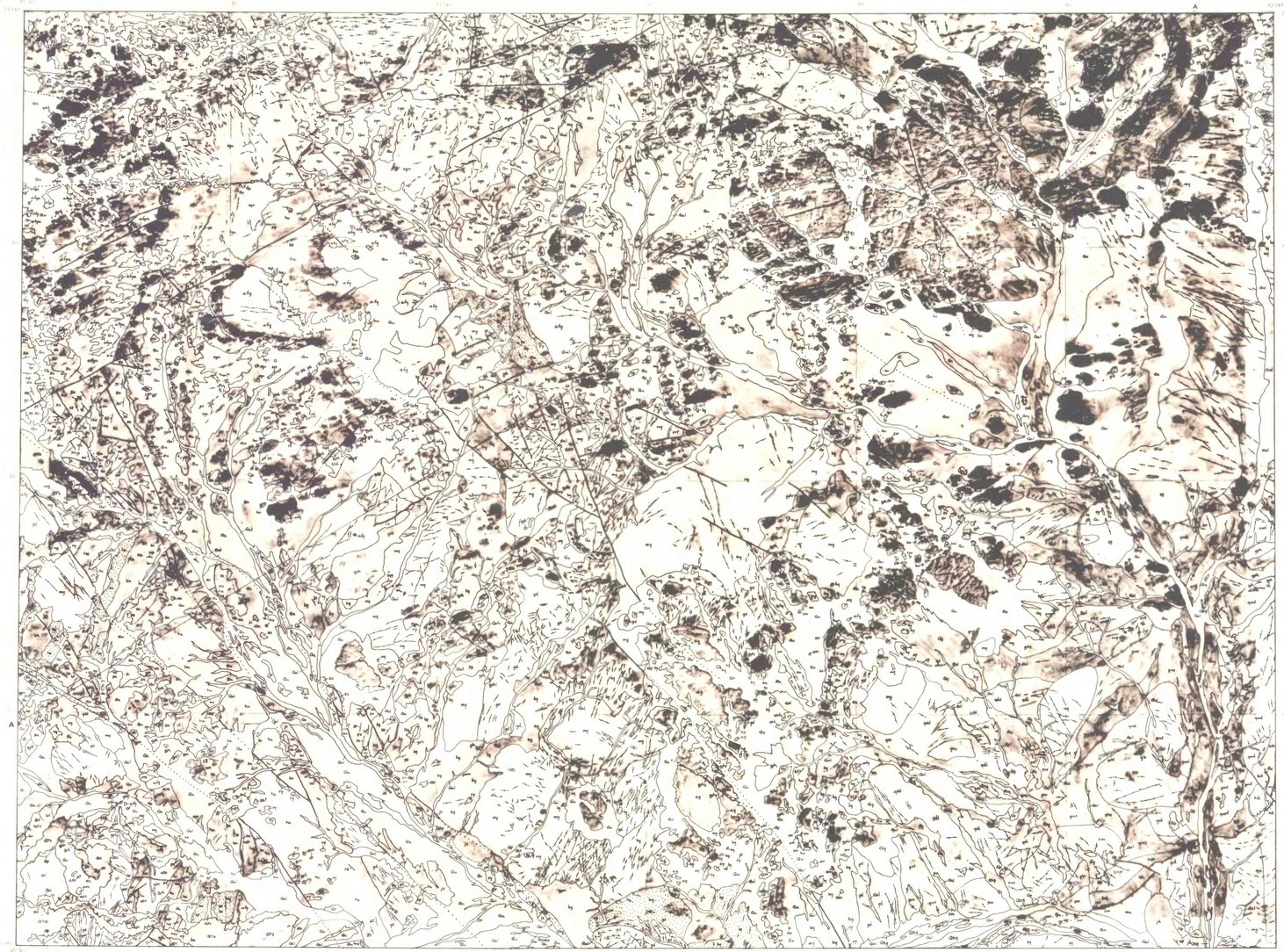
- ap — APLITE
- ry — INTRUSIVE RHYOLITE DIKES AND PLUGS
- gph, gph2, gph1 — GRANOPHYRE--Includes two-feldspar granophyre (gph1), alkali-feldspar granophyre (gph2), and undivided granophyre (gph)
- ag, afga, afg — SALMA GRANITE COMPLEX--alkali granite (ag); Arfvedsonite alkali-feldspar granite (afga); Biotite alkali-feldspar granite (afg)
- sm — TULQAH COMPLEX
- sg — AS SAFRA SYENOGRANITE
- sgj — JUFAYFAH SYENOGRANITE
- agb, sga — ASH SHU'BAH COMPLEX--Ba'gham granite (agb); Granite, undivided (sga)
- qp, mg — SHUWAYMAN SUITE--Quartz-rich pegmatite (qp); Klob monzogranite (mg)
- gns — BA'AYITH COMPLEX
- qmd — SAMIRAH QUARTZ MONZODIORITE
- gd — MA'A COMPLEX
- qdd — JUWAYY RASHIB COMPLEX
- um — PERIDOTITIC AND GABBROIC ROCKS

SYMBOLS

- CONTACT -- Dotted where concealed
- FAULT -- Showing dip; dotted where concealed; arrows show direction of strike-slip
- THRUST FAULT -- Showing dip; barbs on upper plate; dotted where concealed
- SYNCLINE -- Showing trace of axial plane
- TRACE OF BEDDING
- STRIKE AND DIP OF BEDS -- Inclined, showing inclination
- STRIKE AND DIP OF IGNEOUS LAYERING -- Inclined, showing inclination
- STRIKE AND DIP OF JOINTS
  - Inclined, showing inclination
  - Vertical
- STRIKE AND DIP OF FOLIATION
  - Inclined, showing inclination
  - Vertical
- LOCATION OF GEOCHRONOLOGY SAMPLE SHOWING AGE
- ANCIENT WORKINGS

LITHOLOGY

- GNEISSIC AND SCHISTOSE ROCK



Prepared by the United States Geological Survey for the Kingdom of Saudi Arabia from computer-enhanced Landsat MSS band 7 imagery. Geodetic control by United States Geological Survey. Transverse Mercator Projection, 1924 International Datum.

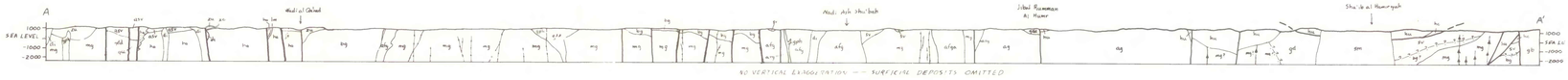
This report has not been edited or reviewed for conformity with U.S. Geological Survey standards and nomenclature

SCALE 1:250 000

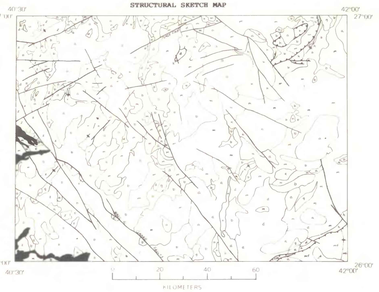
1981 MAGNETIC DECLINATION IS 1.5° EAST OF TRUE NORTH OVER ENTIRE AREA. ANNUAL CHANGE IS NEGLIGIBLE.
ELEVATIONS ARE SHOWN IN METERS. DATUM IS MEAN SEA LEVEL.

Compiled in 1984 from geology mapped by the United States Geological Survey.

The transliteration of Arabic names on this map does not necessarily conform to the official spelling for the Kingdom of Saudi Arabia.



STRUCTURAL SKETCH MAP



EXPLANATION

- Harrat basalt
- j — Jibalah group
- z — Zarghat formation
- h — Hadn and Hibshi formations
- jd — Jurdawiyah group
- mf — Maraghan formation
- b — Hulayfah group
- g — Gabbro and diabase
- a — Post-Hadn granitic rocks and granophyre and intrusive rhyolite
- m — Pre-Hadn granitic rocks
- d — Juwayy Rashib Complex
- um — Ultramafic and associated gabbroic rocks
- Contact
- Fault
- Thrust fault

A	B	C
D	E	F

SOURCES OF GEOLOGICAL DATA

A. Quick, J. E., 1984a, Reconnaissance geology of the Zarghat quadrangle, sheet 26/40B, Kingdom of Saudi Arabia: Saudi Arabian Deputy Ministry for Mineral Resources Open-File Report USGS-OF-04-28, 37 p. Also, 1984, USGS Open-File Report 84-79.

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D. O'Neill, J. M., and Ferris, D. C., 1985, Reconnaissance geology of the Ar Rawdh quadrangle, sheet 26/40 D, Kingdom of Saudi Arabia: Saudi Arabian Deputy Ministry for Mineral Resources Open-File Report USGS-OF-05-3, 24 p. Also, 1985, USGS Open-File Report 85-659.

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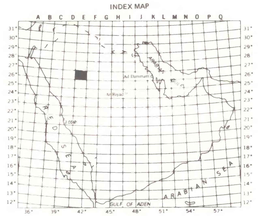
F. Williams, P. L., and Simonds, F. W., 1985, Reconnaissance geology of the Al Ba'ayith quadrangle, sheet 26/41 D, with a Geographic map compiled by Jack D. Turner, Kingdom of Saudi Arabia: Saudi Arabian Deputy Ministry for Mineral Resources Open-File Report USGS-OF-05-18, 38 p. Also, 1985, USGS Open-File Report 85-617.

INDEX TO ADJOINING SHEETS

JIBAL AL MISMA	HAIL	BAQA
HARRAT ITHNAYN	WADI ASH SHU'BAH	JABAL HABASHI
KHAYBAR	NUGRAH	ABAN AL AHMAR

28°, 27°, 26°, 25°; 39°, 40° 30', 42°, 43° 30'

INDEX MAP



GEOLOGIC MAP OF THE WADI ASH SHU'BAH QUADRANGLE, SHEET 26E, KINGDOM OF SAUDI ARABIA

Compiled by James E. Quick and Jeff L. Doebrich

1987