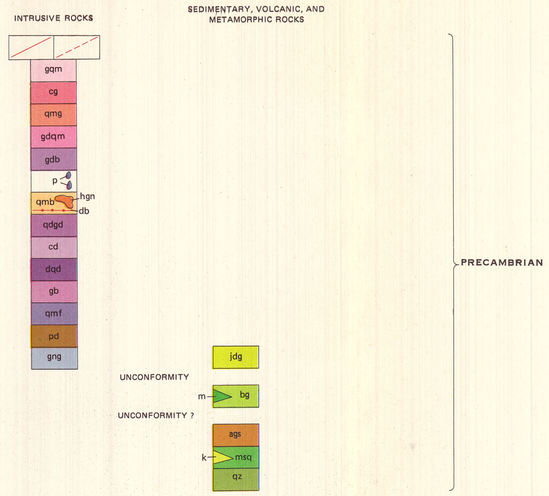
MINISTRY OF PETROLEUM AND MINERAL RESOURCES
DIRECTORATE GENERAL OF MINERAL RESOURCES

KINGDOM OF SAUDI ARABIA

GEOLOGIC MAP GM-27
SHEET 20/40 B

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

INTRUSIVE ROCKS

- MAFIC DIKE–Mostly basalt; unaltered, columnar
- FELSIC DIKE–Coarse grained
- gqm — GRANOPHYRIC GRANITE AND QUARTZ MONZONITE–Fine grained; forms an elongated pluton and numerous small irregular masses
- cg — COMPLEX OF GRANITE, QUARTZ MONZONITE, GRANODIORITE, GABBRO, AND AMPHIBOLITE–Irregular intrusive melanges of all rock types in general area
- qmg — QUARTZ MONZONITE AND GRANITE–Somewhat porphyritic; abundant hornblendic inclusions and large blocks of older biotite quartz monzonite and metavolcanic rocks; forms oval to irregular plutons
- gdqm — BIOTITE GRANODIORITE AND QUARTZ MONZONITE–Massive, cores of plutons medium grained; borders sheared
- gdb — BIOTITE GRANODIORITE–Gray, medium grained, massive; forms numerous small irregular masses
- p — PEGMATITE–Forms small bodies and irregular dikes in diorite in northeast part of quadrangle
- hgn, db, qmb — BIOTITE QUARTZ MONZONITE–Medium grained, massive to sheared and foliated. Contains numerous inclusions and large stoped blocks of hornblendite, amphibolite, and hornblende gneiss (hgn). Dike of diabase (db)
- qdgd — LEUCOCRATIC QUARTZ DIORITE AND GRANODIORITE–Fine grained to medium grained, massive; forms small stocks
- cd — COMPLEX OF DIORITE, QUARTZ DIORITE, GRANODIORITE, GABBRO, AND METAMORPHIC ROCKS–Variously assimilated
- dqd — DIORITE AND QUARTZ DIORITE–Medium grained to coarse grained, massive to gneissic; forms oval to irregular masses
- gb — GABBRO–Gray or black, medium grained or porphyritic; abundant constituent in intrusive complexes
- qmf — FOLIATED QUARTZ MONZONITE–Light colored, fine grained; mostly highly sheared and mylonitized
- pd — PERIDOTITE–Black, coarse grained; forms small bodies in southeast part of quadrangle
- gng — GRANITE ORTHOGNEISS–Fine grained to medium grained

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

- jdg — JIDDAH GROUP–Mostly metamorphosed intermediate tuff, agglomerate, and flow rocks; minor basalt and a few layers of conglomerate and quartzite
- m, bg — BAISH GROUP–Metamorphosed basalt and volcaniclastic rocks. Isolated lenses of marble, (m)

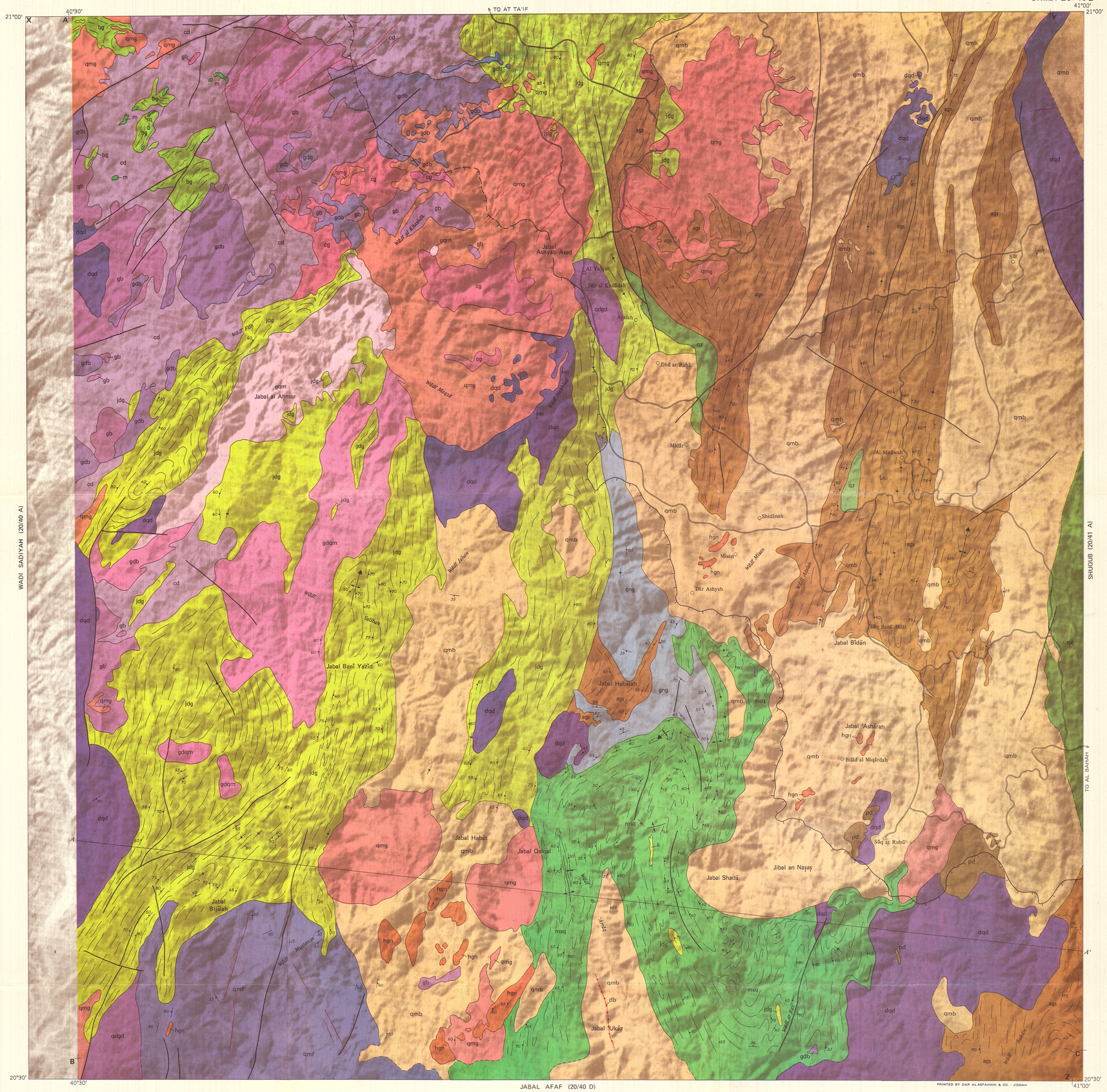
MEDIUM- TO HIGH-GRADE METAMORPHIC ROCKS

- ags — Amphibolite, hornblende gneiss, and schist
- k, msq — Marble, mica schist, and quartzite. Kyanite-bearing mica schist (k)
- qz — Quartzite and micaceous quartzite

- CONTACT–Dashed where approximately located
- FAULT
- ANTICLINE OR ANTIFORM–Showing crestline and plunge
- SYNCLINE OR SYNFORM–Showing troughline and plunge

STRIKE AND DIP OF SCHISTOSITY, FOLIATION, OR LAYERING

- 80 — Inclined
- Vertical
- TREND LINE–Showing schistosity, foliation, or layering
- RED SEA ESCARPMENT – Hachures on low side. Dashed where vague in the north



JABAL AFAF (20/40 D)

SCALE 1:100 000

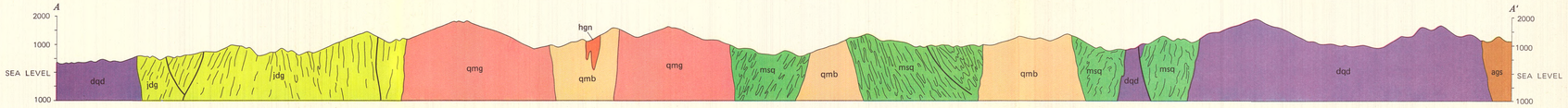
2 0 2 4 6 8 10 KILOMETERS

2 0 2 4 6 8 10 MILES

PRINTED BY DAR AL ASFAHANI & CO. - JIDDAH

Geology mapped in early 1973.

Base is near orthophoto from LANDSAT-1 image fitted by inspection to graticule of controlled mosaics prepared by Aero Service Corp. (1951 and 1956). Inasmuch as mosaics on the north and east were controlled to a datum different from the datum used to control mosaics on the south and west, and the fact the two datums are not reconcilable, makes it impossible to determine the exact scale or true north. However, a best match for detail for the Wadi Sa'diyah quadrangle (sheet 20/40 A) on the west may be obtained by fitting corners to points A and B; for the Jabal 'Afaf quadrangle (sheet 20/40 D) on the south points B and C; for sheet 21/41 D on the north points X and Y; and for the Shuqub quadrangle (sheet 20/41 A) on the east points Y and Z. The base image is oversize so as to include corner tics of adjoining quadrangle, from which lat and long values were derived.



RECONNAISSANCE GEOLOGY OF THE WADI SALIBAH QUADRANGLE, SHEET 20/40 B, KINGDOM OF SAUDI ARABIA

By
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1977