U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY, PREPARED FOR
MINISTRY OF PETROLEUM AND MINERAL RESOURCES
DIRECTORATE GENERAL OF MINERAL RESOURCES

KINGDOM OF SAUDI ARABIA

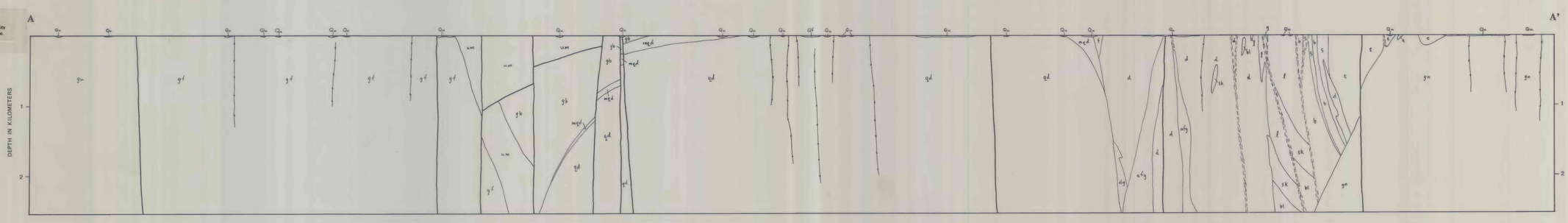
TECHNICAL RECORD
USGS-70-301
PLATE 1B

24°45'
41°15'

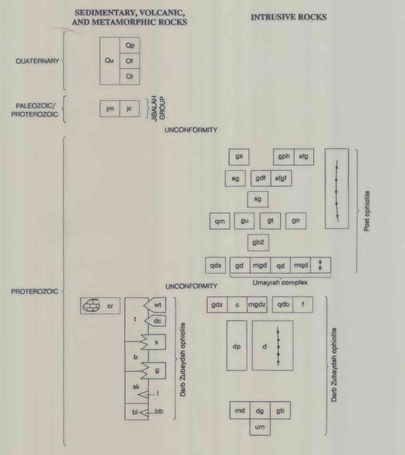
The top edge of Plate 1B adjoins to the bottom edge of Plate 1A.

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

24°45'
41°30'



CORRELATION OF MAP UNITS



LIST OF MAP UNITS

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

SURFICIAL DEPOSITS

- Qu SURFICIAL DEPOSITS UNDIVIDED
- Qp PLAYA LAKE DEPOSITS
- Qf FAN DEPOSITS
- Qt TERRACE GRAVEL

JIBALAH GROUP

- jm LIMESTONE
- jc CONGLOMERATE

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS OF THE DARB ZUBAYDAH OPHIOLITE

- cr CARBONATE-REPLACED ROCK
- t MASSIVE TUFF
- wt WELDED RHYOLITIC TUFF
- dc WELDED ANDESITIC TUFF
- s SANDSTONE
- b UPPER BASALT SEQUENCE
- g GOSSAN
- sk KAFFAN SANDSTONE
- l Lahar deposit
- bl LOWER BASALT SEQUENCE
- bb Basaltic breccia and tuff

INTRUSIVE ROCKS

POST-OPHIOLITE INTRUSIVE ROCKS

- gs SANAM GRANITE
- gph GRANOPHYRE
- afg ALKALI-FELDSPAR GRANITE
- GRANOPHYRE DIKE
- ag ALKALI GRANITE
- gdf FOLIATED GRANODIORITE
- sg SAKHIRAH GRANITE
- afgf Foliated granodiorite member
- qm QUARTZ MONZONITE
- gu GRANITE, UNDIVIDED
- gf FADLIYAH GRANODIORITE
- gn NIFAZI GRANITE
- gb2 TWO-PYROXENE GABBRO
- qds SAQ'AH QUARTZ DIORITE

Umayrah complex

- gd GRANODIORITE
- mgd Microcrystalline member
- qd QUARTZ DIORITE
- mqd Microcrystalline member
- MAGNETITE VEIN

INTRUSIVE ROCKS OF THE DARB ZUBAYDAH

- gdz ZAYNAH GRANODIORITE
- c Clinopyroxene-rich member
- mgdz Microcrystalline member
- qdb BARAQ QUARTZ DIORITE
- f Microcrystalline member
- dp PORPHYRITIC DIABASE
- d DIABASE
- Dike
- md METAGABBRO
- dg MICROGABBRO
- gb GABBRO
- um ULTRAMAFIC ROCKS

0 1 2 3 KILOMETERS
SCALE 1: 25 000

GEOLOGIC MAP OF THE BI'R NIFAZI QUADRANGLE, KINGDOM OF SAUDI ARABIA

EXPLANATION OF MAP SYMBOLS

- CONTACT
- FAULT--Showing lateral slip and zone of carbonate replacement
- THRUST FAULT--Barbs on upper plate; dip indicated by arrow
- STRIKE AND DIP OF BEDS
  - 30 Inclined, showing dip
  - Vertical
  - 85 Overturned, showing dip
- STRIKE AND DIP OF FOLIATION
  - 70 Inclined, showing dip
  - Vertical
- STRIKE AND DIP OF SPINEL FOLIATION IN ULTRAMAFIC ROCKS
  - 70 Inclined, showing dip; lineation given by arrow
- STRIKE AND DIP OF DIKE
  - 70 Inclined, showing dip
  - Vertical
- • 235 LOCATION OF GEOCHEMISTRY SAMPLE--Showing last three numbers of a six digit number. All numbers have a prefix of 240.
- SHAMAL, SIFAR, FITAR NAMED GOSSAN LOCALITY

LITHOLOGY

- Fault-zone foliation