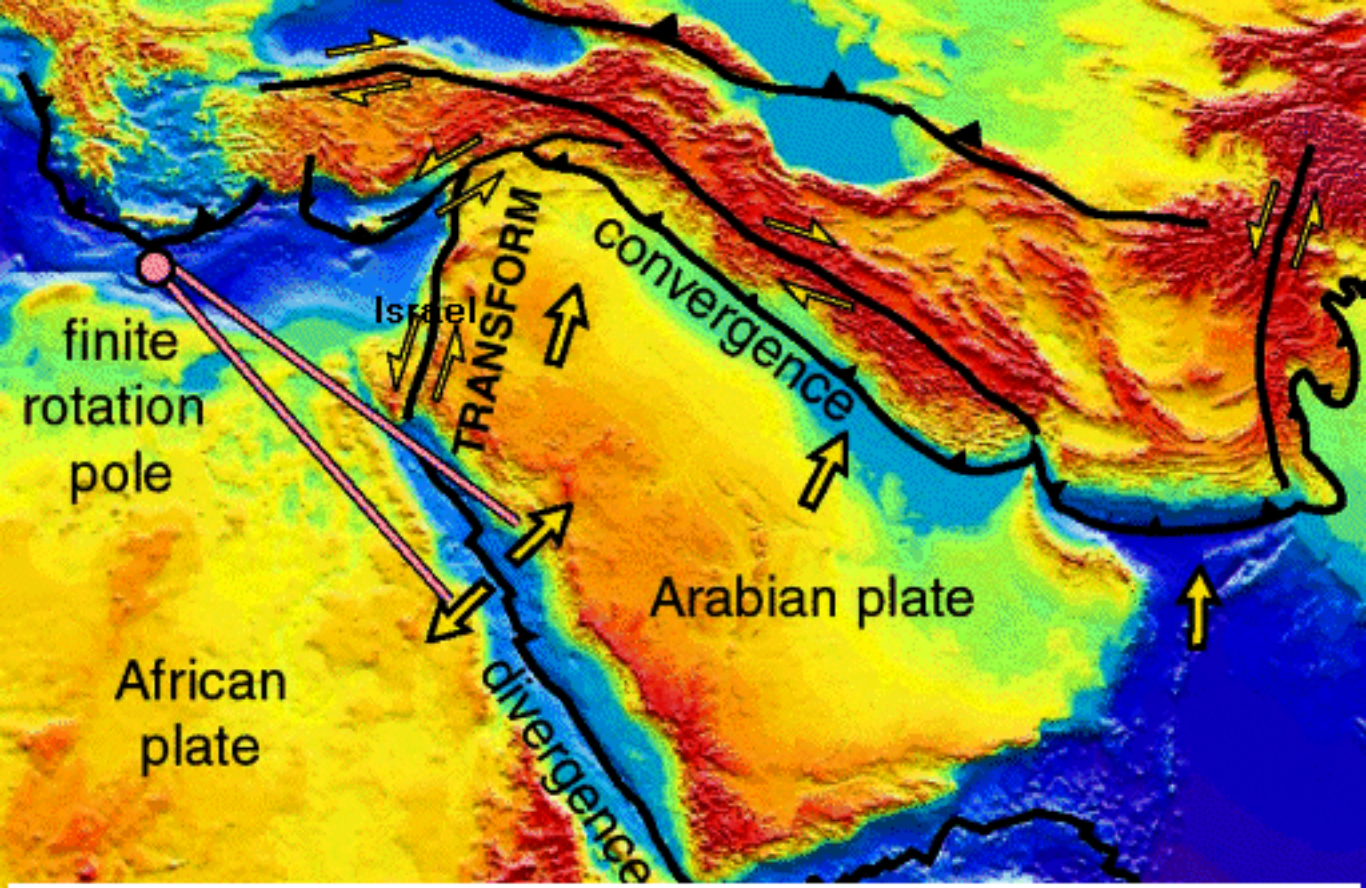
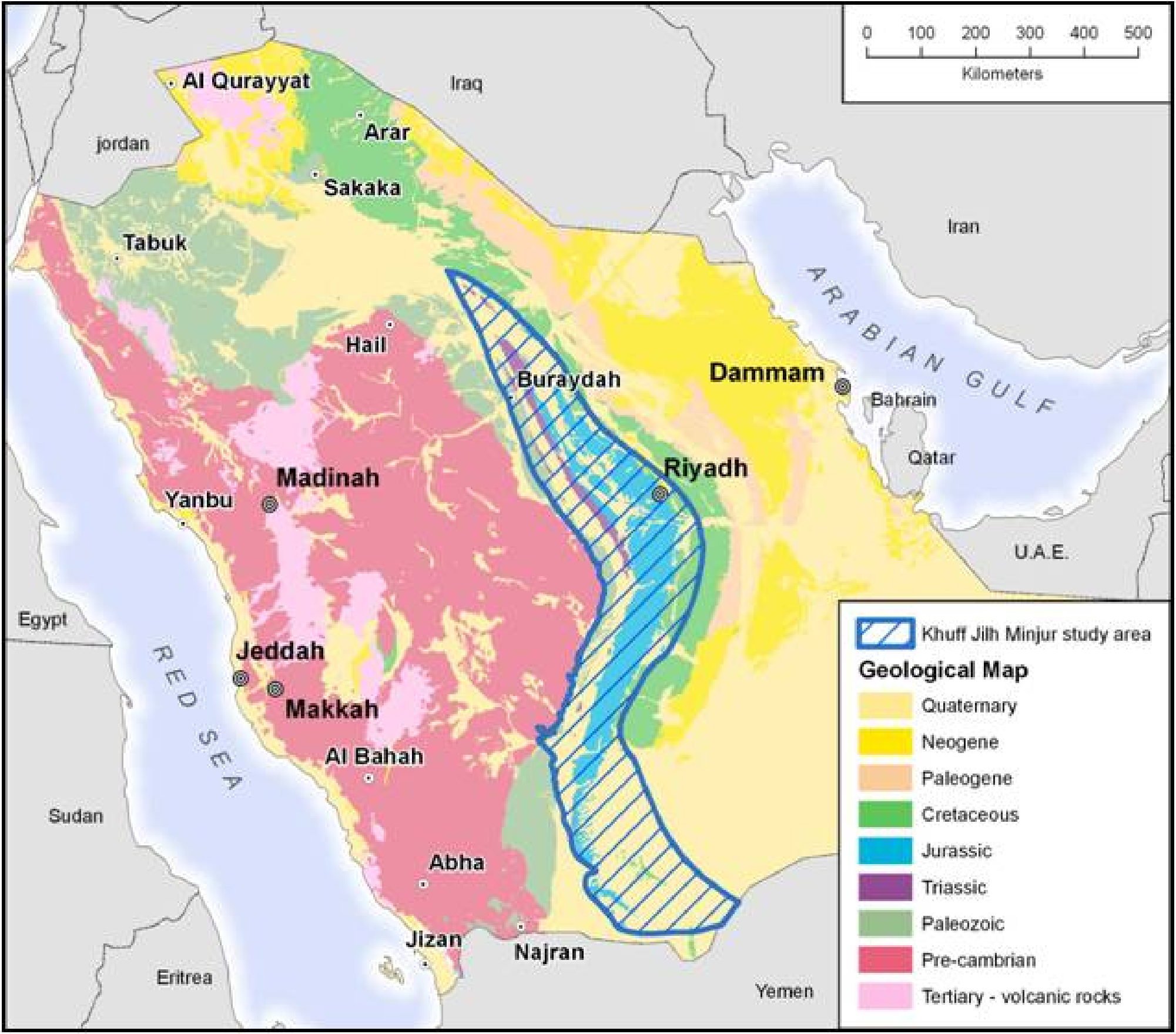
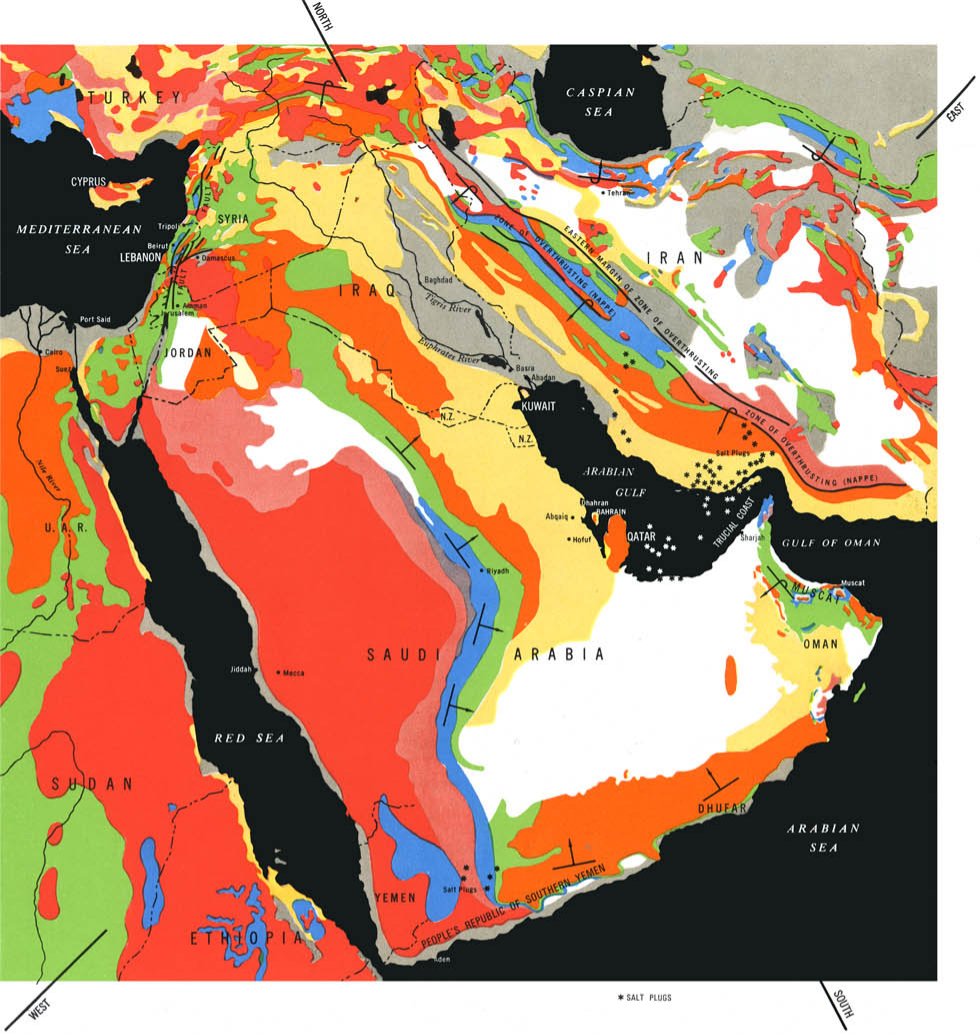
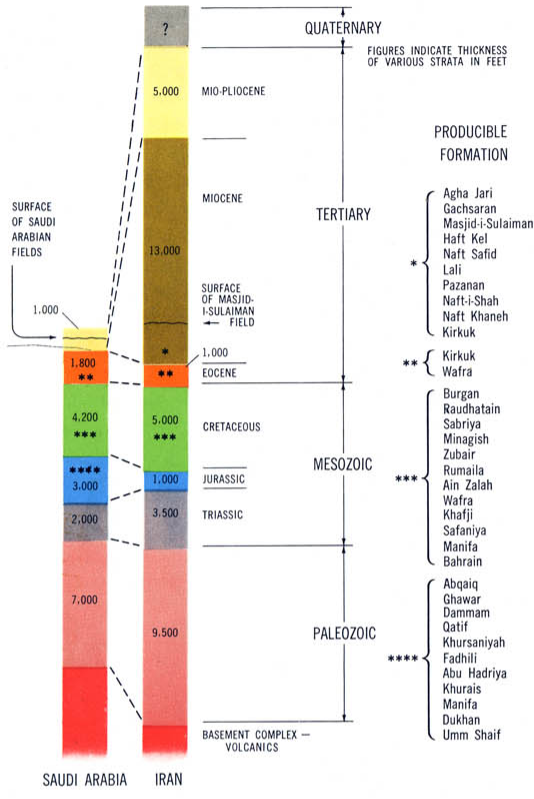


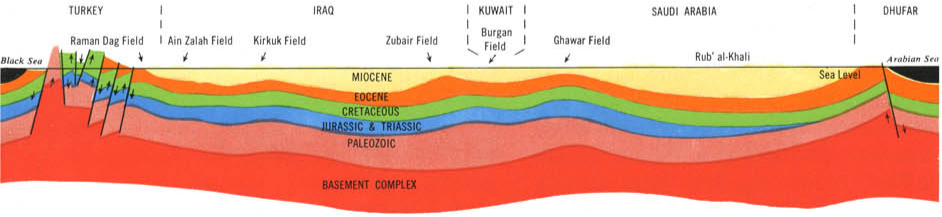
You can read more about the tectonics of the Dead Sea Transform by clicking on this graphic, which will take you to the site where the picture originated.

GEOLOGIC MAP OF THE ARABIAN PENINSULA
SAUDI GEOLOGICAL SURVEY
JORDAN
Turayf
Al Qurayyat
IRAQ
WIDYĀN
Sakākā
Rafḥā
KUWAIT
Tabūk
AN NAFŪD
NORTHWESTERN ARABIA
Taymā'
Ḥā'il
Buraydah
Hafar al Bāṭin
Al Jubayl
Ad Dammām
IRAN
BAHRAIN
QATAR
Strait of Hormuz
Al Wajh
NAJD
Al Madīnah
FAULT
Yanbu' al Baḥr
EGYPT
CENTRAL ARABIA
Ar Riyāḍ
Al Kharj
Al Hufūf
UNITED ARAB EMIRATES
Ḥalabān
Ẓalm
Nubian desert
Jiddah
Makkah
Aṭ Ṭā'if
Al Līth
SYSTEM
Al Bāḥah
SOUTHERN ARABIA
Al Qunfudhah
As Sulayyil
AR RUB' AL KHĀLĪ
OMAN
Abhā
Najrān
Ash Sharawrah
Jīzān
Farasān Islands
YEMEN
DJIBOUTI
GULF OF ADEN
ARABIAN SEA
GULF OF OMAN
Quaternary deposits
Coastal plain sediments
Cenozoic volcanic rocks (harrats)
Neogene
Paleogene
Cretaceous
Jurassic
Late Permian to Triassic
Paleozoic
Precambrian
Arabian platform
Oman ophiolites
Oman autochthonous
Oman allochthonous front
Pre-Wasia Formation erosion surface
Pre-Khuff Formation erosion surface (Late Permian)
Major fault
Main oil fields
City, town, village
International frontier

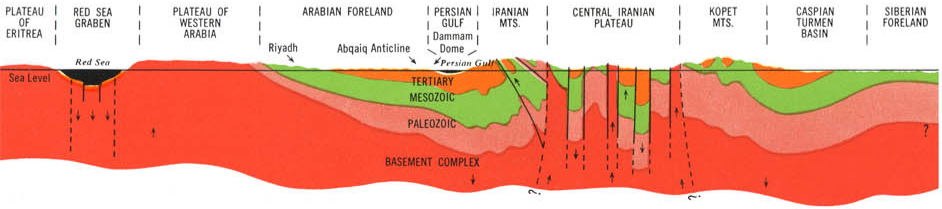

0 100 200 300 400 500
Kilometers
Al Qurayyat
Iraq
Arar
jordan
Sakaka
Tabuk
Iran
ARABIAN GULF
Hail
Buraydah
Dammam
Bahrain
Qatar
Riyadh
Madinah
Yanbu
U.A.E.
Egypt
Jeddah
RED SEA
Makkah
Al Bahah
Sudan
Abha
Jizan
Najran
Eritrea
Yemen
Khuff Jilh Minjur study area
Geological Map
Quaternary
Neogene
Paleogene
Cretaceous
Jurassic
Triassic
Paleozoic
Pre-cambrian
Tertiary - volcanic rocks





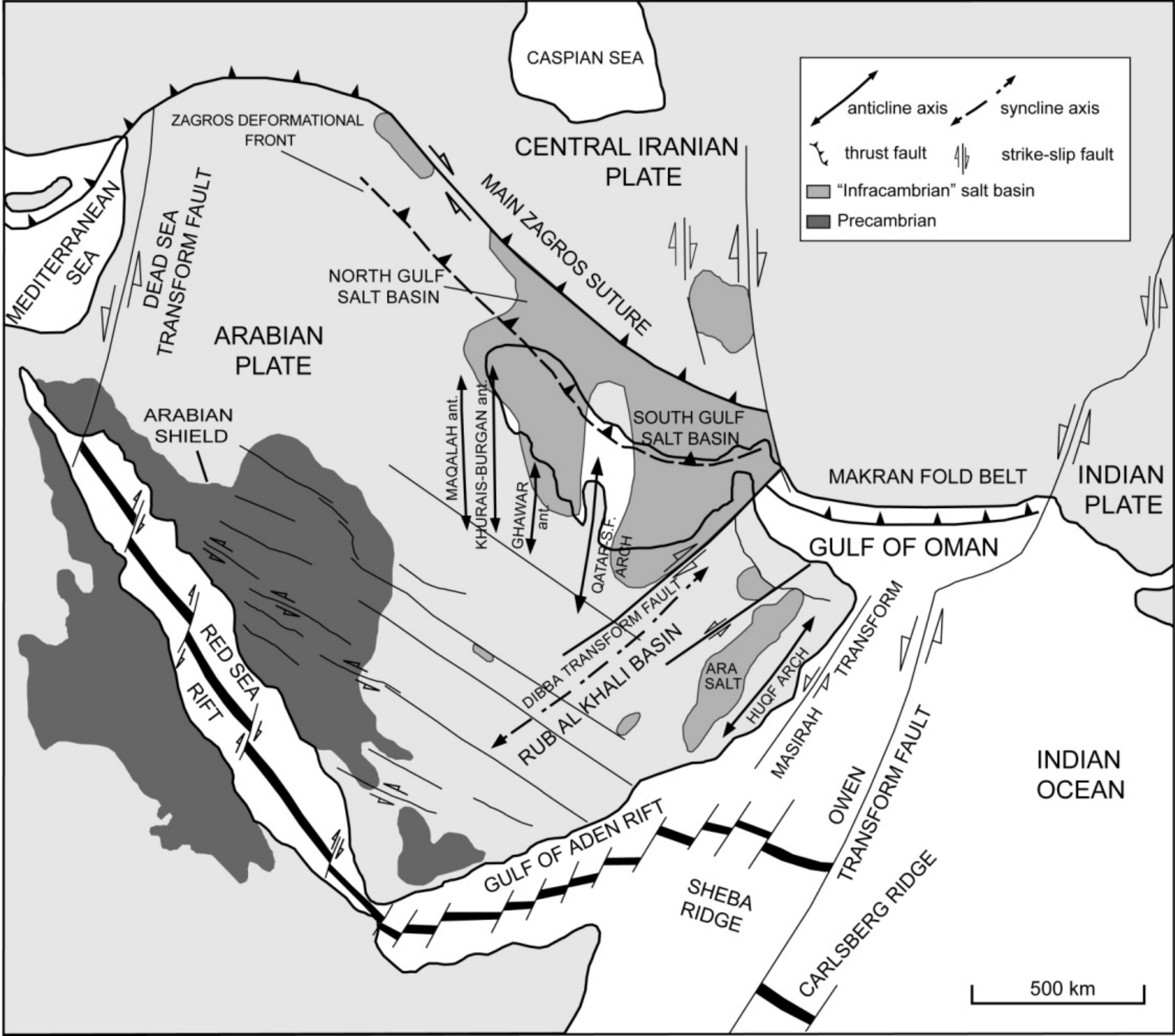


NORTH TO SOUTH

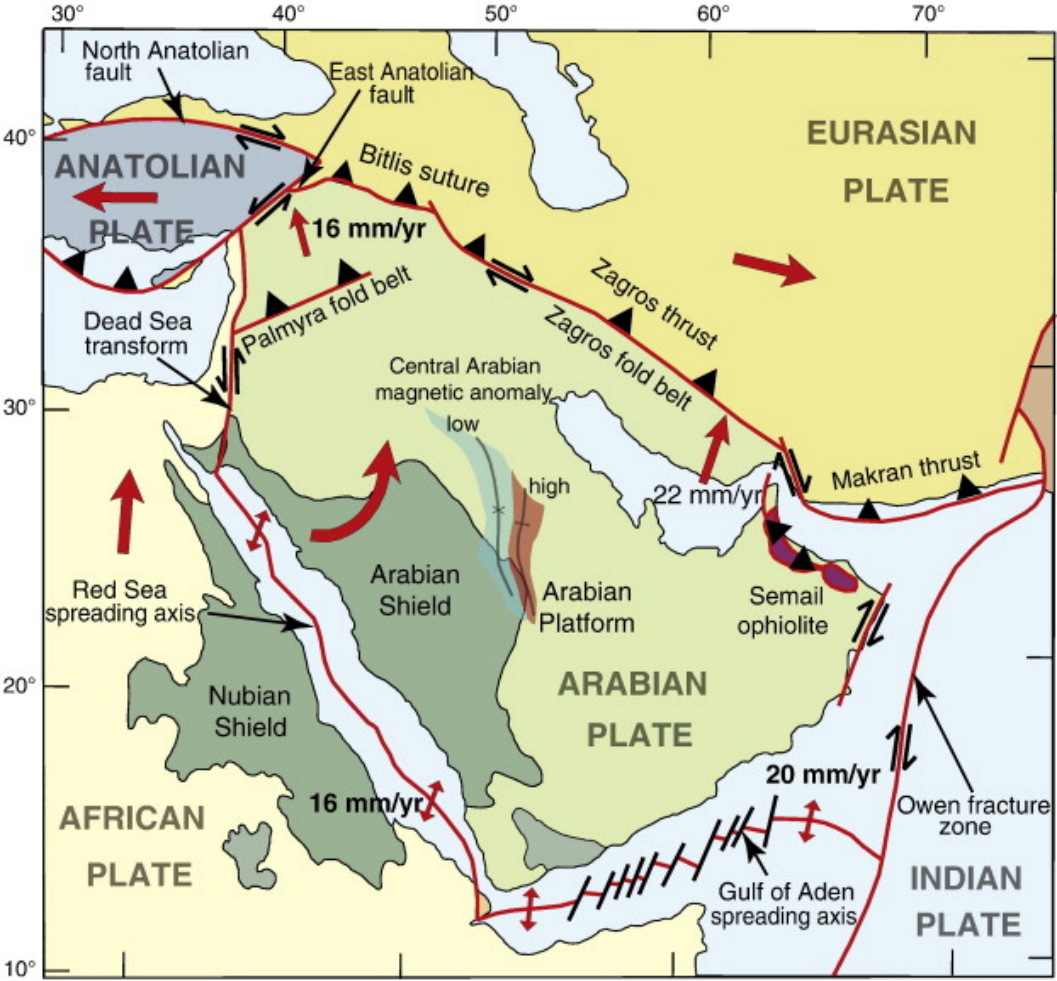


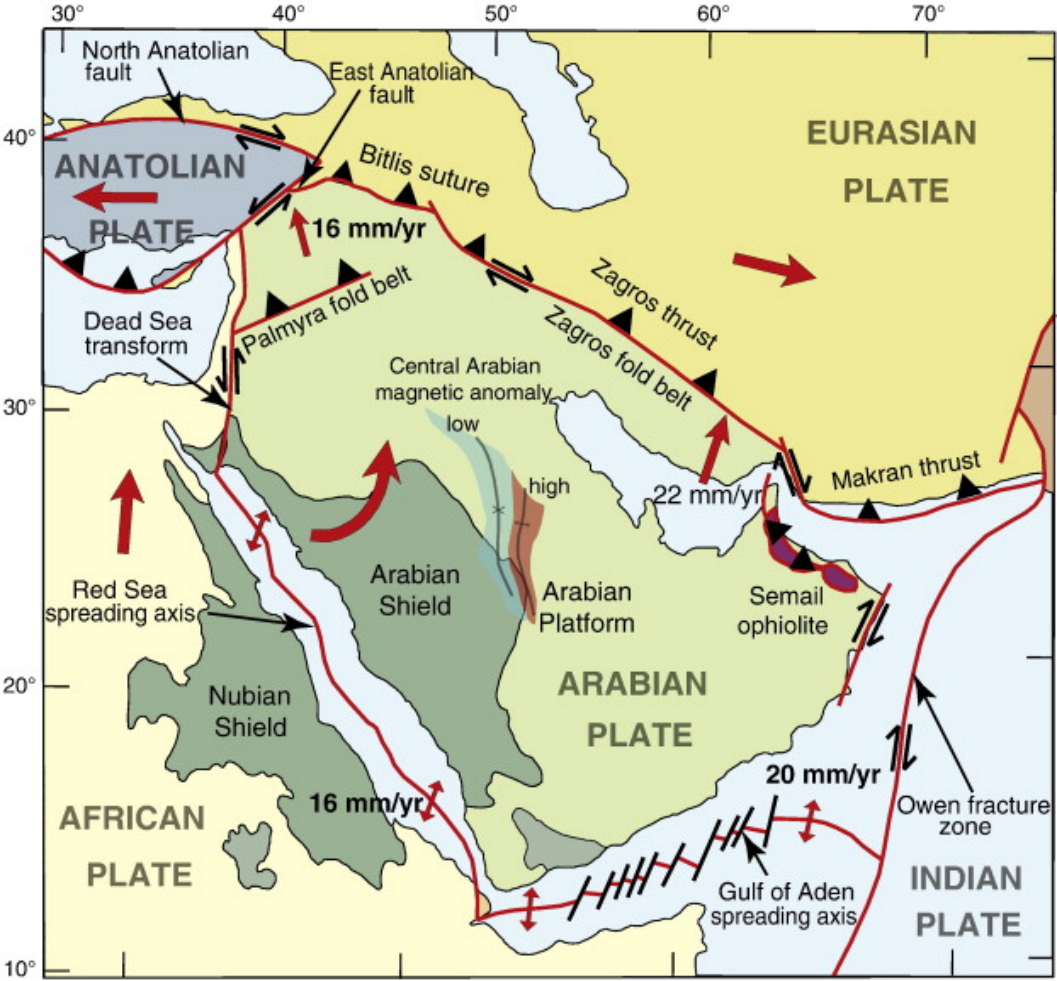
WEST TO EAST

NOTE: QUATERNARY NOT SHOWN ON CROSS SECTIONS.


CASPIAN SEA
ZAGROS DEFORMATIONAL FRONT
CENTRAL IRANIAN PLATE
MAIN ZAGROS SUTURE
MEDITERRANEAN SEA
DEAD SEA TRANSFORM FAULT
NORTH GULF SALT BASIN
ARABIAN PLATE
ARABIAN SHIELD
MAQALAH ant.
KHURAIS-BURGAN ant.
GHAWAR ant.
SOUTH GULF SALT BASIN
QATAR S.F. ARCH
MAKRAN FOLD BELT
INDIAN PLATE
GULF OF OMAN
DIBBA TRANSFORM FAULT
RUB AL KHALI BASIN
ARA SALT
HUQF ARCH
MASIRAH TRANSFORM
RED SEA RIFT
OWEN TRANSFORM FAULT
INDIAN OCEAN
GULF OF ADEN RIFT
SHEBA RIDGE
CARLSBERG RIDGE
500 km
anticline axis
syncline axis
thrust fault
strike-slip fault
"Infracambrian" salt basin
Precambrian

Natural resources* of Saudi Arabia
JORDAN
IRAQ
KUWAIT
Tabuk
Hail
Dammam
Persian Gulf
Riyadh
Hofuf
Medina
Yanbu
Jeddah
Mecca
Taif
AL-RUB AL-KHALI
Undefined borders
SUDAN
Red Sea
Abha
Najran
ERITREA
YEMEN
Arabian Nubian Shield
Saudi Arabia
AFRICA
Arabian Nubian Shield
Gold
Copper
Lead/zinc
Iron ore
Tin
Bauxite
Phosphate
Granite, marble
Cement factory
* Oil and gas not included
500 Km


30°
40°
50°
60°
70°
40°
30°
20°
10°
North Anatolian fault
East Anatolian fault
ANATOLIAN PLATE
EURASIAN PLATE
Bitlis suture
16 mm/yr
Zagros thrust
Zagros fold belt
Palmyra fold belt
Dead Sea transform
Central Arabian magnetic anomaly
low
high
22 mm/yr
Makran thrust
Red Sea spreading axis
Arabian Shield
Arabian Platform
Semail ophiolite
ARABIAN PLATE
Nubian Shield
AFRICAN PLATE
16 mm/yr
20 mm/yr
Owen fracture zone
Gulf of Aden spreading axis
INDIAN PLATE


30°
40°
50°
60°
70°
40°
30°
20°
10°
North Anatolian fault
East Anatolian fault
ANATOLIAN PLATE
EURASIAN PLATE
Bitlis suture
16 mm/yr
Zagros thrust
Zagros fold belt
Palmyra fold belt
Dead Sea transform
Central Arabian magnetic anomaly
low
high
22 mm/yr
Makran thrust
Red Sea spreading axis
Arabian Shield
Arabian Platform
Semail ophiolite
ARABIAN PLATE
Nubian Shield
AFRICAN PLATE
16 mm/yr
20 mm/yr
Owen fracture zone
Gulf of Aden spreading axis
INDIAN PLATE

For countries that do not produce reliable headcounts (like Afghanistan and Saudi Arabia), or any ethnic, linguistic or religious breakdown (Turkey), or for those that intentionally obscure or manipulate any such data (Egypt, Syria, Yemen), indirect methods of counting become necessary.

Much can be learned from the colonial statistics by the French and the British that administered the entire Arab World intermittently until WWII. These can be supplemented by anthropological monographs. Locally, Turkey did produce some such data until 1960 openly, and into the 1970s, secretly. The Iranian armed forces put out much anthropological information at the village level, but few or no percentages--just "majorities/minorities" proclamations. With the advent of the Internet, many a "hidden" group has found an outlet to make themselves known to the world via that medium. However, due to their pent-up zeal and desire to make their case urgent, they commonly exaggerate, if not falsify their numbers to magnify their importance. Their figures are suspect at best, but a good indicator of the complexity of the human terrain of the Middle East.

M. Izady

Black Sea
Caspian Sea
Mediterranean Sea
Red Sea
Persian Gulf
Gulf of Oman
Arabian Sea
Gulf of Aden

TURKEY
SYRIA
IRAQ
IRAN
AFGHANISTAN
JORDAN
KUWAIT
SAUDI ARABIA
BAHRAIN
QATAR
U.A.E.
OMAN
YEMEN
EGYPT

Edirne, Istanbul, Samsun, Adapazari, Bursa, ANKARA, Trabzon, Kars, Izmir, Sivas, Tunceli, Kaisari, Konya, Malatya, Diarbakir, Van, Adana, Antep, Urmi, Tabriz, Rasht, Aleppo, YEZIDI, Mosul, Latakia, Arbil, Qazvin, Meshhad, Tartus, Dair el-Zur, Sulaimania, Kirkuk, Sinendaj, TEHRAN, Hama, Tripoli, Hims, BEIRUT, Hamadan, DAMASCUS, Kirmanshah, Tyre, Haifa, BAGHDAD, TEL AVIV, AMMAN, Karbala, Isfahan, Alexandria, Port Said, Gaza, Jerusalem, Najaf, Amara, Yazd, Damietta, Ismailia, Diwania, Ahwaz, Siwa, CAIRO, Nasiria, Basra, Ma'an, Elat, Aqaba, Fayyum, Jawf, Shiraz, Bawiti, Kuwait, Bushehr, TUR, Zafarana, Tabuk, Lar, Asyut, Ha'il, Bandar Abbas, Minab, Suhaj, Qina, Luxor, Idfu, Aswan, Abu Simbel, Medina, RIYADH, Harad, Qatif, Dhahran, Mubarraz, Hofuf, Sharjah, Dubai, DOHA, ABU DHABI, Suhar, al-Ayn, Jask, Chahbahar, MUSCAT, Jeddah, Mecca, Ta'if, Yam, Abha, Zahran, Najran, Jizan, Sa'da, Salalah, SANAA, Ma'rib, Shabwa, Hudaida, Mukalla, Mocha, Ta'izz, Lahij, Aden

Mazar-i Sharif, KABUL, Jalalabad, Bamian, Ghazni, Kandahar, Birjand, Yazd, Kirman, Bam, Zahedan, Fahraj

Egyptian Shias in the south are primarily Ismailis, while those in the north are fewer in numbers and a mix of Ismailis and Imamis

Religious Composition of the Middle East

Islam:

- Sunnism (Hanafi, Shafi'i, Maliki and Hanbali rites)
- Shiism (Imami, Zaidi and Isma'ili rites, as well as Alevism, Yarsanism, and Zikrism)
- Ibadism
- Wahhabism (Salafism, Muwahhidun)

- Christianity (various denomiations)
- Judaism
- Zoroastrianism
- Druze
- Other (Yezidism, Nusairism, Animism/Zâr-Bâd, Hinduism etc.
- Mixed religion areas

Remarks: The adherents to the Wahhabi/Salafi branch of Islam often present themselves to be a reformed branch of the Hanbali Sunnism. Pending a consensus on this identity among other Sunni scholars, Wahhabism is presented as an indpendent branch of Islam in here.

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Population Density Key (no. of persons per square miles)

Sparse/empty (0-14) | Low (15-100) | High (more than 100)

Middle East Religions' Statistics:

Population figures are in millions and are based on 2008-09 estimates. The number of adherents to a given religion are counted by cultural and not confessional criteria

	State Total	Sunni No.	Sunni %	Shia No.	Shia %	Christians No.	Christians %	Jews No.	Jews %	Other* No.	Other* %
Egypt	77.4 mil	67.2	86.8	2.24	2.9	7.89	10.2	neg		0.07	0.1
Iran	74.9	8.09	10.8	64.94	86.7	0.77	1.03	34k	0.03	1.08	1.44
Turkey	71.6	57.35	80.1	14.1	19.6	0.08	0.01	18k	0.02	0.05	0.07
Iraq	30.7	9.92	32.3	19.4	63.2	0.71	2.3	neg		0.97	2.16
Yemen	23.6	13.3	56.36	10.27	43.51	neg		neg		0.03	0.07
Syria	21.9	15.98	73.0	3.29	14.7	2.04	9.3	neg		0.59	2.7
S. Arabia	28.7/17.3	9.0	52.0	4.33	25.0	-		-		3.97	23.0
Israel	7.3	1.17	16.1	-		0.39	5.3	5.49	75.21	0.11	1.5
Jordan	6.3	5.76	91.5	0.03	0.5	0.40	6.3	-		0.11	1.8
Lebanon	4.2	1.22	29.0	1.93	46.0	0.78	18.7	neg		0.26	6.3
(Palestine)	3.7	3.14	84.8	neg		0.29	7.84	neg		neg	
Oman	2.8/1.95	0.27	14.0	0.1	5.0	neg		neg		1.58	81.0
Kuwait	2.9/0.92	0.69	75.0	0.20	21.0	neg		-		0.04	4.0
UAE	4.6/0.76	0.29	39.0	0.08	10.5	neg		-		0.39	51.5
Bahrain	1.05/0.53	0.12	21.0	0.39	73.0	neg		neg		0.03	6.0
Qatar	0.97/0.32	0.11	36.0	0.06	18.0	-		-		0.15	46.0
M.E.Totals	343.28	193.61	56.4	121.36	35.4	13.32	3.91	5.76	1.7	9.47	2.76

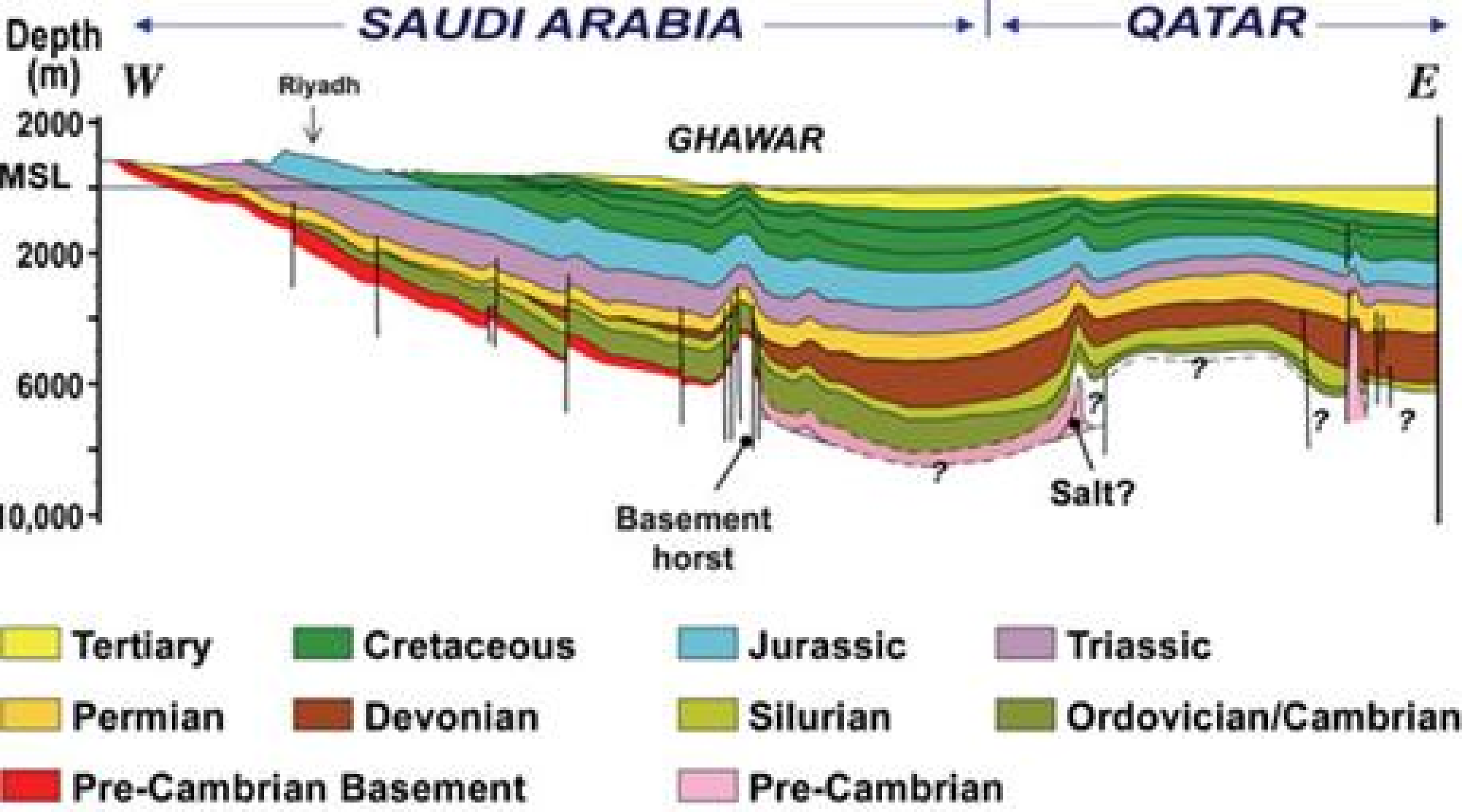
"Others" include Muslim Wahhabis, Ibadis and Ahmadis, as well as the non-Muslim Baha'is, Druze, Zoroastrians, Yezidis, Animists/Zar-Bad and Hindus.

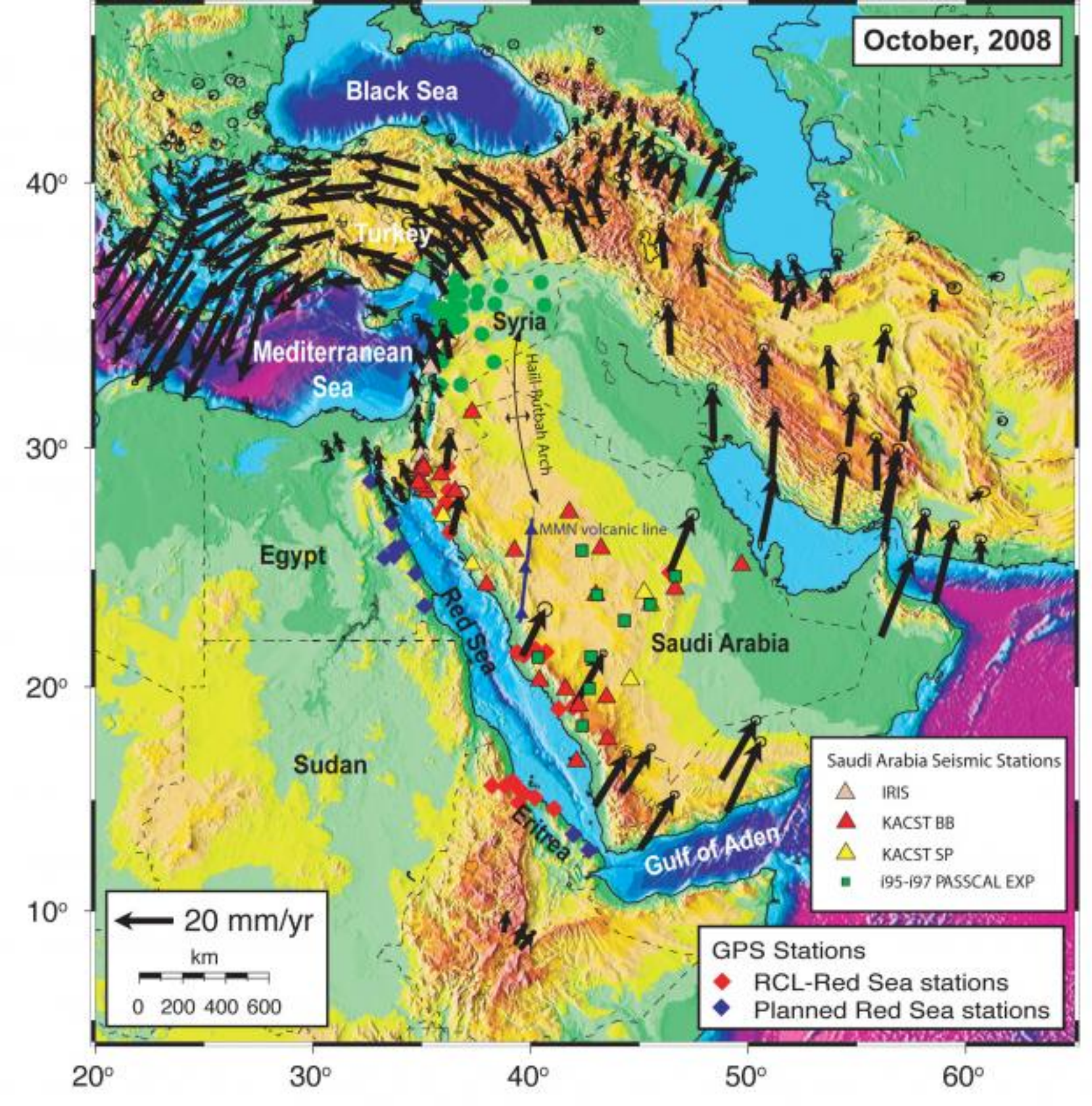
Pending a final peace settlement, all Jews who have settled the in West Bank and the Golan Heights --more than 650,000--are here counted under the figures for Israel per se.

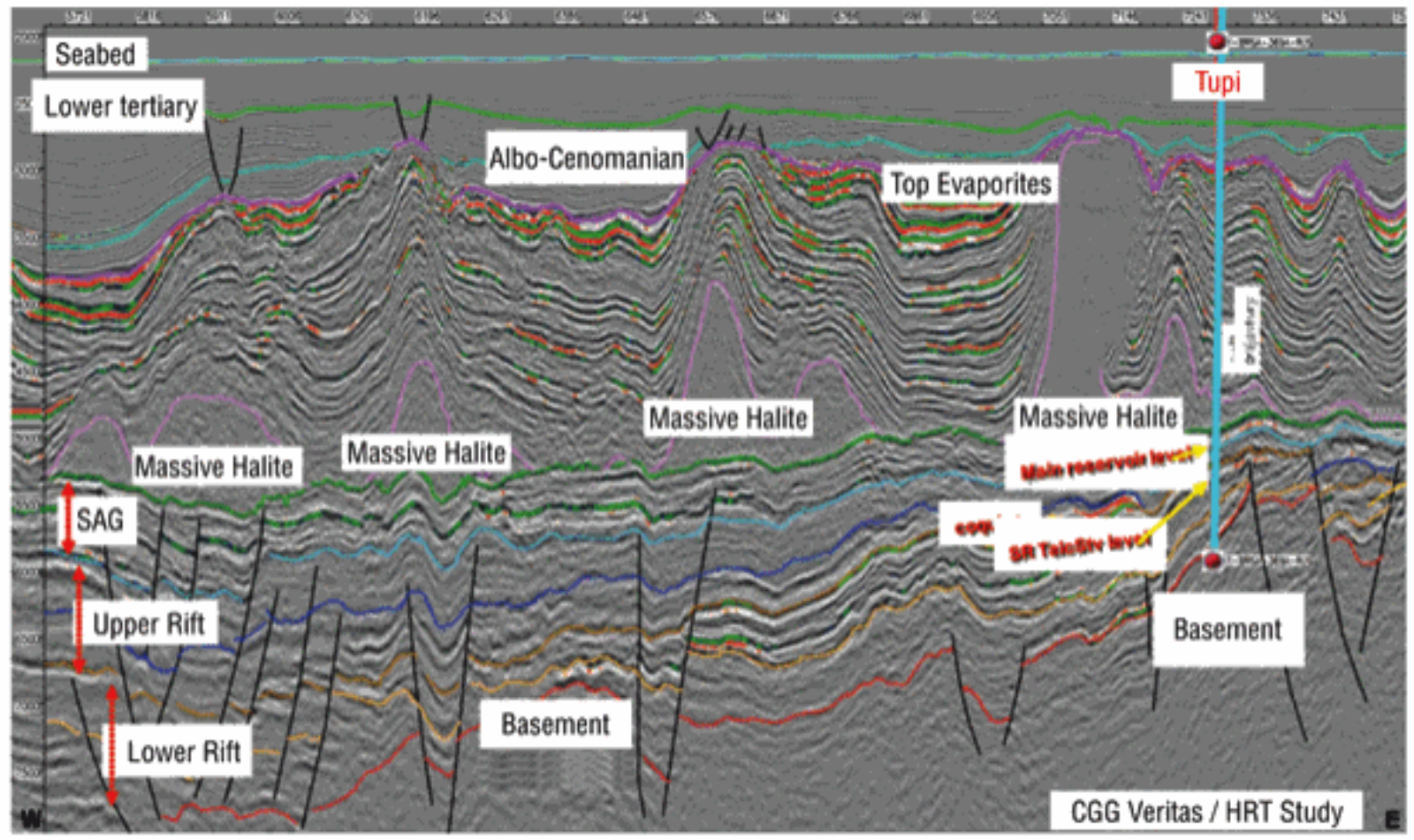
Christians in Israel comprise the native Arab Christians (approx 90k) and the recent non-Jewish Russian immigrants (approx 300k)

Expariate workers--often outnumbering the native populations of the most of the GCC states, are not included in these figures. Here, two population figures are provided for each state to reflect this.

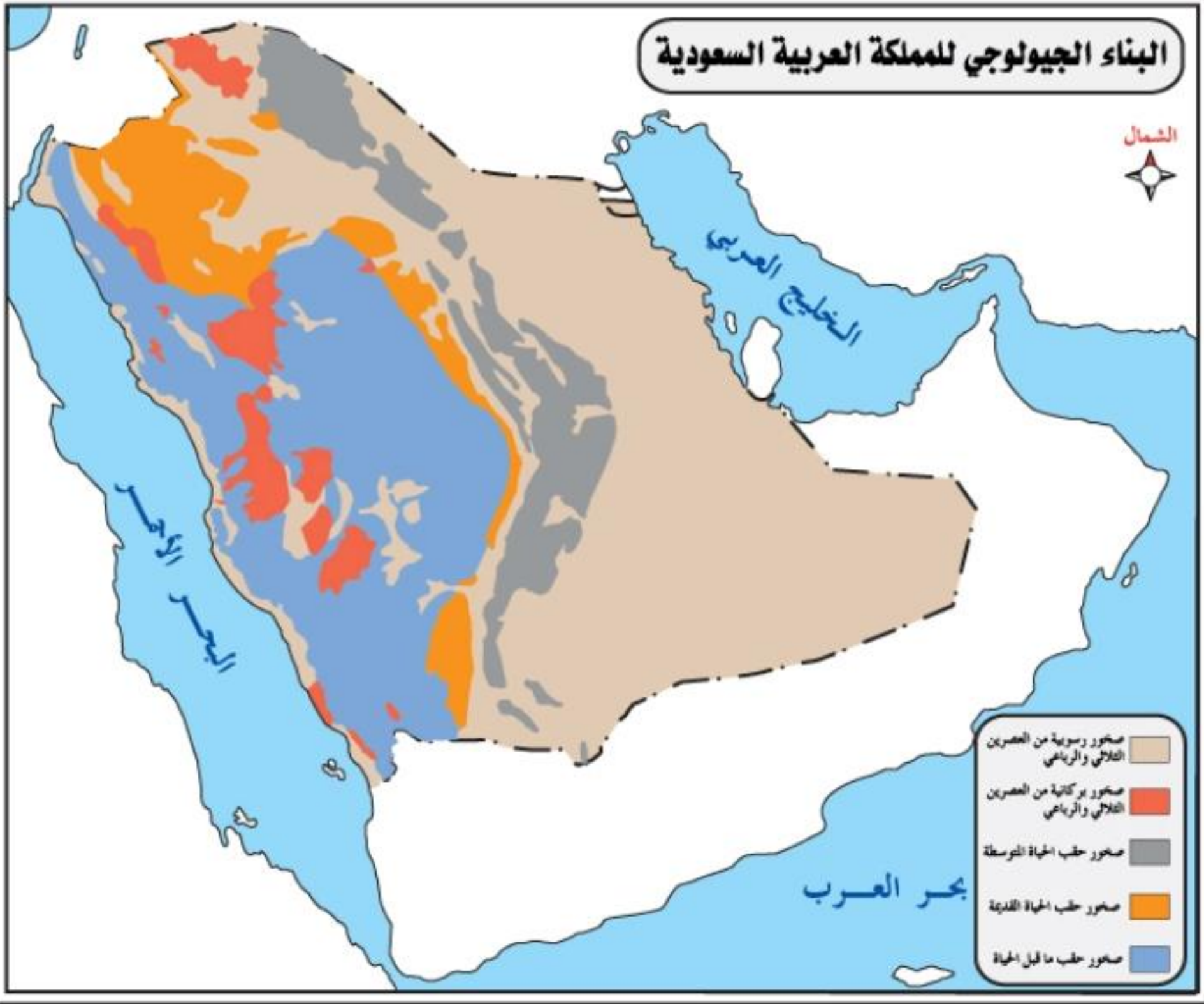
Totals may not be equal to the sum of their increments due to the rounding of the figures.


SAUDI ARABIA
QATAR
Depth (m)
W
E
Riyadh
GHAWAR
2000
MSL
2000
6000
10,000
Basement horst
Salt?
Tertiary
Cretaceous
Jurassic
Triassic
Permian
Devonian
Silurian
Ordovician/Cambrian
Pre-Cambrian Basement
Pre-Cambrian

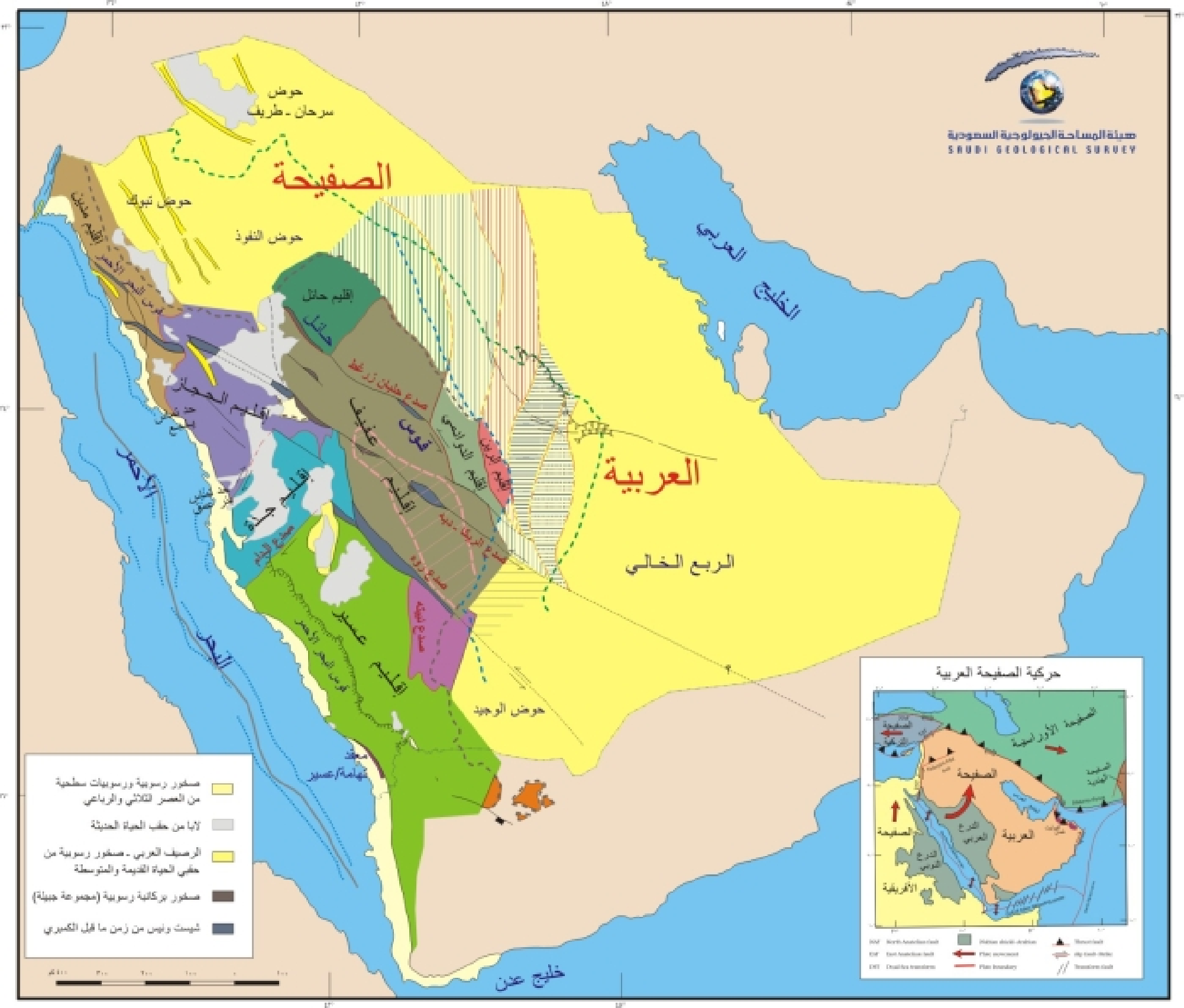

October, 2008
Black Sea
Turkey
Syria
Mediterranean Sea
Hail-Rutbah Arch
MMN volcanic line
Egypt
Red Sea
Saudi Arabia
Sudan
Eritrea
Gulf of Aden
40°
30°
20°
10°
20°
30°
40°
50°
60°
Saudi Arabia Seismic Stations
IRIS
KACST BB
KACST SP
I95-I97 PASSCAL EXP
GPS Stations
RCL-Red Sea stations
Planned Red Sea stations
20 mm/yr
km
0 200 400 600


Seabed
Lower tertiary
Albo-Cenomanian
Top Evaporites
Tupi
Massive Halite
Massive Halite
Massive Halite
Massive Halite
SAG
Upper Rift
Lower Rift
Basement
Basement
CGG Veritas / HRT Study
W
E
46 km

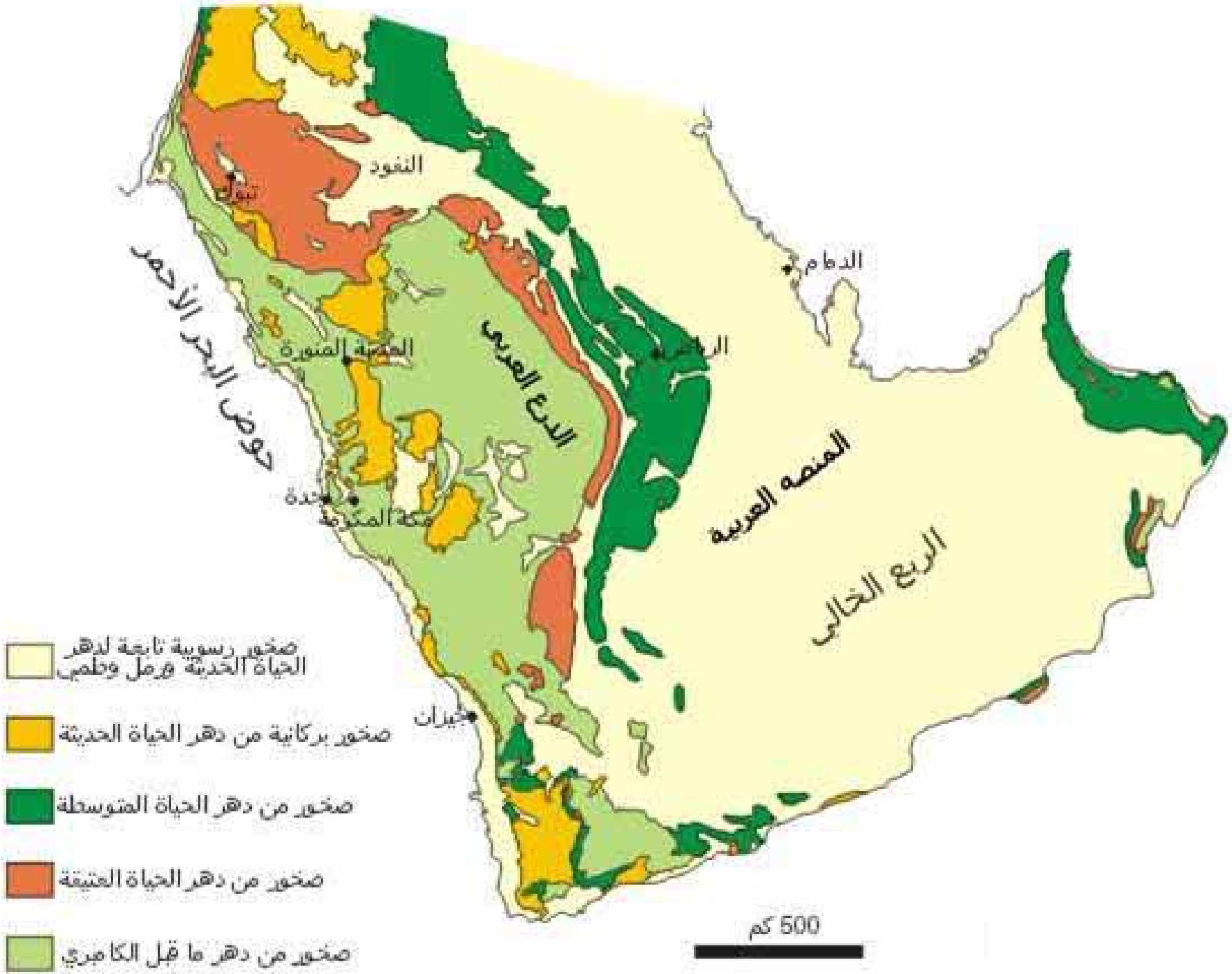
هيئة المساحة الجيولوجية السعودية
SAUDI GEOLOGICAL SURVEY
طريف
الجوف
تبوك
صحراء النفود
تيماء
حائل
حفر الباطن
الجبيل
الدمام
الوجه
بريدة
شقراء
الهفوف
الرياض
الخرج
ينبع
المدينة المنورة
حلبان
ظلم
جدة
مكة المكرمة
الطائف
السليل
صحراء الربع الخالي
الليث
الباحة
القنفذة
أبها
نجران
شروره
جازان
البحر الأحمر
الخليج العربي
بحر العرب
رواسب حديثة
رواسب ساحلية
الـحرات
صخور الغطاء الرباعي
صخور الغطاء الثلاثي
صخور الغطاء الطباشيري
صخور الغطاء الجوراسي
صخور الغطاء البرمي
صخور الغطاء الكمبري
صخور الدرع العربي
حدود الدرع العربي
الصدوع الرئيسية
المـــدن
حدود دولية
SCALE 1:15,000,000
0 100 200 300 km


البناء الجيولوجي للمملكة العربية السعودية
الشمال
الخليج العربي
البحر الأحمر
بحر العرب
صخور رسوبية من العصرين الثلاثي والرباعي
صخور بركانية من العصرين الثلاثي والرباعي
صخور حقب الحياة المتوسطة
صخور حقب الحياة القديمة
صخور حقب ما قبل الحياة

mo3alem.com


هيئة المساحة الجيولوجية السعودية
SAUDI GEOLOGICAL SURVEY
الصفيحة العربية
الخليج العربي
البحر الأحمر
الربع الخالي
حوض سرحان - طريف
حوض تبوك
حوض النفود
إقليم حائل
إقليم الصحارى
إقليم جازان
إقليم عسير
حوض الوجيد
خليج عدن
حركية الصفيحة العربية
صخور رسوبية ورسوبيات سطحية من العصر الثلاثي والرباعي
إما من حقب الحياة الحديثة
الرصيف العربي - صخور رسوبية من حقبي الحياة القديمة والمتوسطة
صخور بركانية رسوبية (مجموعة جيزان)
شيست ونيس من زمن ما قبل الكمبري

جيولوجية المملكة العربية السعودية والمناطق المجاورة



Juvenile crust of the ANS

Isotopically defined Khida terrane

Archean-Mesoproterozoic crust intercalated with and southeast of the ANS

Archean-early Neoproterozoic crust of Saharan Metacraton

Terrane boundary

ANS U-Pb geochronology by method and age

Sample dated by single grain analyses

- Single grain, 550-599 Ma
- Single grain, 600-649 Ma
- Single grain, 650-699 Ma
- Single grain, 700-749 Ma
- Single grain, 750-799 Ma
- Single grain, 800-880 Ma
- Single grain, >880 Ma
- Neoproterozoic, but no preferred age

Sample dated by multigrain analyses

- Multigrain, 550-599 Ma
- Multigrain, 600-649 Ma
- Multigrain, 650-699 Ma
- Multigrain, 700-749 Ma
- Multigrain, 750-799 Ma
- Multigrain, 800-880 Ma
- Multigrain, >880 Ma

Mediterranean

0 250 500 km

CAIRO

Egypt

Eastern Desert

NUBIAN SHIELD

Aswan

Gebel el Asr

Bir Safsaf

Uweinat

SAHARAN METACRATON

Atmur-Delgo

Sudan

BAYUDA DESERT

Rahaba-Absol

Sabaloka

KHARTOUM

Gebeit

Haya

Butana

Nakfa and Ghedem

PORT SUDAN

Red Sea

JIDDAH

Midyan

Hulayfah

Ha'il

Saudi Arabia

Hijaz

Afif

Ad Dawadimi

RIYADH

Jiddah

Ar Rayn

Khida

Asir

Tathlith

ARABIAN SHIELD

SA'ANA

Al Bayda

Abas

Al Mukalla

Al Mahfid

Gulf of Aden

Somalia basement

Inda Ad

32° 28° 30° 34° 38° 42° 46°

30° 28° 24° 20° 16° 12°

Saudi Arabia

International boundary
Emirate boundary
★ National capital
Railroad
Road

There are no emirate capitals. Administration is from Riyadh.

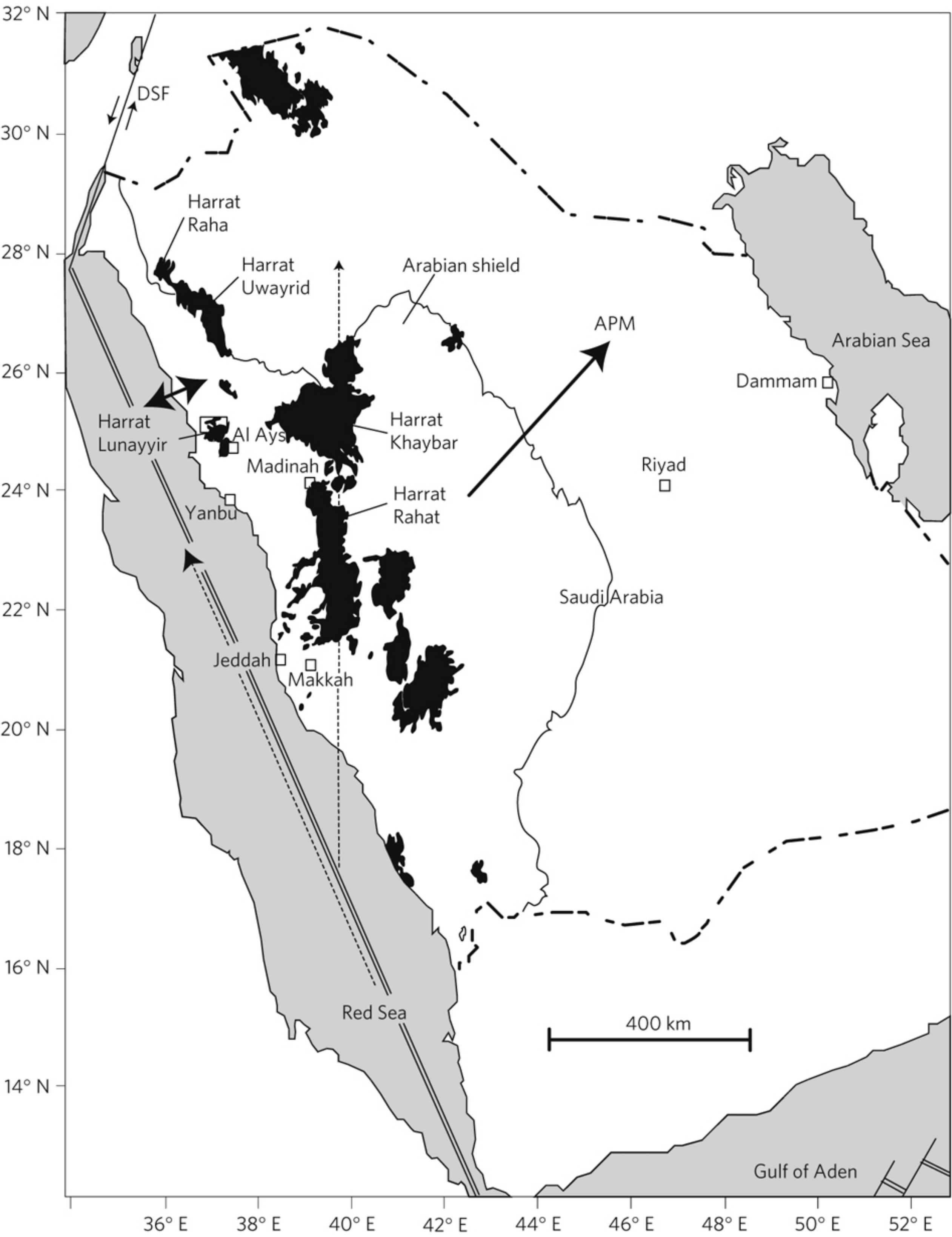
0 200 Kilometers
0 200 Miles

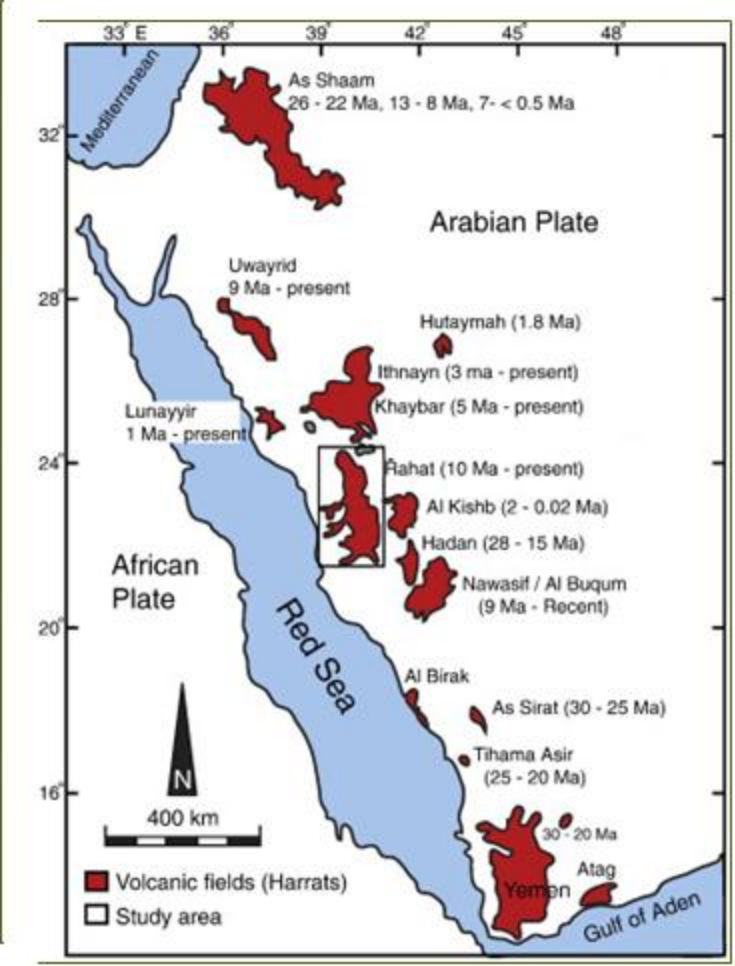
Beirut
LEBANON
SYRIA
Damascus
Haifa
ISRAEL
Tel Aviv-Yafo
Jerusalem
Amman
JORDAN
Armistice Line
Elat
Al 'Aqabah
Ḥaql
Turayf
Kāf
'Ar'ar
Sakākah
AL JAWF
AL ḤUDŪD ASH SHAMĀLIYAH
Rafḥā'
N.Z.
Al Bi'r
AL QURAYYĀT
Tabūk
TABŪK
Ḍubā
Taymā'
Jubbah
Ḥā'il
Baq'ā'
Buraydah
'Unayzah
AL QAṢĪM
Rumāḥ
Ḥafar al Bāṭin
King Khalid Military City
Al Wajh
Umm Lujj
AL MADĪNAH
Yanbu' al Baḥr
Medina
EGYPT
Mīnā' Baranis
Badr Ḥunayn
Afīf
Ḥalabān
Riyadh
Ad Dawādimī
Al Kharj
Ḥarad
Admin. Boundary
Red Sea
Ẓalim
MAKKAH
Jiddah
Mecca
Aṭ Ṭā'if
Ranyah
Al Khamāsīn
As Sulayyil
AR RIYĀḌ
SUDAN
Port Sudan
Al Qunfudhah
AL BĀḤAH
Qal'at Bīshah
'ASĪR
Khamis Mushayṭ
Abhā
NAJRĀN
Najrān
Ash Sharawrah
JAZĀ'IR FARASĀN
JĪZĀN
Jīzān
Āk'ordat
Mits'iwa
Kassalā
Āsmera
Tekezē
ETHIOPIA
Gonder
Wenz
Desē
Sanaa
Al Ḥudaydah
YEMEN
Zabīd
Ibb
Ta'izz
Mocha
Lahij
Aden
Āseb
DJIBOUTI
Djibouti
Berbera
SOMALIA
Gulf of Aden
Suywūn
Sayḥūt
Al Mukallā
Socotra (YEMEN)
Arabian Sea
Bākhtarān
Khorramābād
Dezfūl
Eṣfahān
IRAQ
Baghdad
Karbalā'
Al Ḥillah
An Najaf
Al 'Amārah
Tigris
Euphrates
IRAN
Ahvāz
Al Baṣrah
Ābādān
Bandar-e Khomeyni
Shīrāz
Kuwait
KUWAIT
Ra's al Khafji
Bandar-e Būshehr
Persian Gulf
Al Jubayl
Ad Dammām
Dhahran
BAHRAIN
Manama
QATAR
Doha
Al Ḥufūf
As Salwá
Strait of Hormuz
Ra's al Khaymah
OMAN
Dubayy
Abu Dhabi
UNITED ARAB EMIRATES
Al Fujayrah
Gulf of Oman
Ṣuḥār
Al Buraymi
Muscat
Ṣūr
ASH SHARQĪYAH (EASTERN PROVINCE)
OMAN
no defined boundary
Administrative Line
Ṣalālah
Bandar-e 'Abbās
IRAN

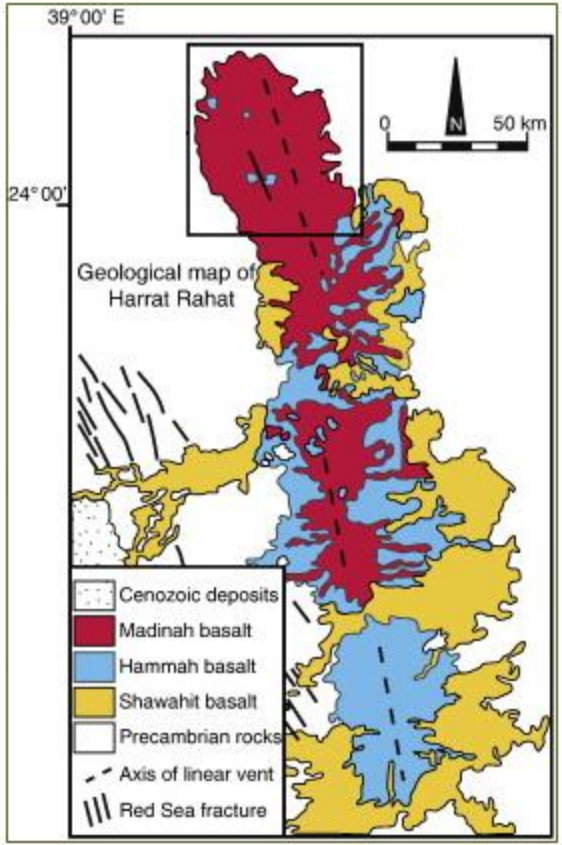
[a] De facto boundary as shown on official Iraqi and Saudi maps (alignment approximate).

Boundary representation is not necessarily authoritative.

Base 801701 (A05796) 3-91


32° N
30° N
28° N
26° N
24° N
22° N
20° N
18° N
16° N
14° N
36° E
38° E
40° E
42° E
44° E
46° E
48° E
50° E
52° E
DSF
Harrat Raha
Harrat Uwayrid
Arabian shield
APM
Arabian Sea
Dammam
Harrat Lunayyir
Al Ays
Harrat Khaybar
Madinah
Riyad
Harrat Rahat
Yanbu
Saudi Arabia
Jeddah
Makkah
Red Sea
400 km
Gulf of Aden


33° E
36°
39°
42°
45°
48°
32°
28°
24°
20°
16°
Mediterranean
As Shaam
26 - 22 Ma, 13 - 8 Ma, 7- < 0.5 Ma
Arabian Plate
Uwayrid
9 Ma - present
Hutaymah (1.8 Ma)
Ithnayn (3 ma - present)
Khaybar (5 Ma - present)
Lunayyir
1 Ma - present
Rahat (10 Ma - present)
Al Kishb (2 - 0.02 Ma)
Hadan (28 - 15 Ma)
African
Plate
Nawasif / Al Buqum
(9 Ma - Recent)
Red Sea
Al Birak
As Sirat (30 - 25 Ma)
Tihama Asir
(25 - 20 Ma)
N
400 km
30 - 20 Ma
Atag
Yemen
Gulf of Aden
Volcanic fields (Harrats)
Study area


39° 00' E
24° 00'
0
N
50 km
Geological map of
Harrat Rahat
Cenozoic deposits
Madinah basalt
Hammah basalt
Shawahit basalt
Precambrian rocks
Axis of linear vent
Red Sea fracture

SGS Pubscenter Drafting section c:\gc\MRM\Roobol\SGS-OF-2002-3\Fig. 1.cdr mrv: 31 July, 2002 g.c.certeza

Figure 1. Map showing the Cenozoic lava fields of Saudi Arabia with Harrat Kishb indicated.