

Middle East Mappack *(with Hydrocarbon Systems, Expanded Iraq, and with Egypt-Libya)*

Representative lithologic columns of most major basins; converted to GTS2020 age model (Apr 2020)

Egypt-Arabia-Iraq-Syria-Iran regions -- Stratigraphic nomenclature, calibration to international stages, regional sequences and main generalized facies are mainly from **Middle East Geological Timescale 2008** by Al-Husseini, *GeoArabia [Journal of Middle East Petroleum Geosciences]* v 13, no. 4, with lithostratigraphy descriptions enhanced from regional lexicons and other publications.

Middle East Tectonic History

Major Middle East Tectonic Events

Libya

Tripolitania and Sirte Basin
Fezzan Basin
Cyrenaica Basin

Chart derived from: USGS Correlation Chart and Columnar Section for Rocks in Libya, 1963. Descriptions from: Hallet, Don: Petroleum Geology of Libya, 2002.

Egypt

Basic Egyptian Stratigraphy Overview
Egypt Gulf of Suez
Egypt Gulf of Suez Lithostrat
Egypt Gulf of Suez Sequences

Saudi Arabia

Red Sea (Saudi Arabia)
Red Sea Sequences
Red Sea Basin (West Saudi Arabia) Petroleum Systems *Source/ reservoir/ seal columns*
NW Saudi Arabia
Saudi Arabia Outcrop
Saudi Arabia Outcrop Sequences
Saudi Arabia Subsurface
Saudi Arabia Subsurface Sequences
Saudi Arabia Petroleum Systems *Source/ reservoir/ seal columns*

Bahrain

Bahrain Lithostrat
Bahrain Sequences

Qatar

Qatar Lithostrat
Qatar Sequences

Kuwait

Kuwait Lithostrat
Kuwait Sequences
Kuwait Petroleum Systems *Source/ reservoir/ seal columns*

Iraq

S Iraq
Southern Iraq Petroleum Systems
Central Iraq
Central and Southern Iraq Petroleum Systems
W Iraq
N Iraq
North Iraq Petroleum Systems *Source/ reservoir/ seal columns*
Kirkuk region (northeast)
Iraq 1 (northeast; Kirkuk region) *NE Iraq 1 Hydrocarbons NE Iraq 1 lithostrat*
Iraq 2 (northeast; Kirkuk region) *NE Iraq 2 Hydrocarbons NE Iraq 2 lithostrat*

Data for Iraq compiled from Jassim, S.Z. et al., "Geology of Iraq", 2006 (their Figures 8-1, 9-1, 10-1, 11-1, 12-1, 13-1, and 14-2); except "Iraq 1/2 of Kirkuk region is from Middle East Geological Timescale 2008 by Al-Husseini, GeoArabia

NE Iraq

NE Iraq (left side) / (right side)

High Folded and Balambo-Tanjero

Foothill zone

Left / Right sides

Dyala Region (NE Iraq) Petroleum Systems

*Source/ reservoir/
seal columns*

Iraq Sequences and Events

Iraq Sequences

Iraq Regional Maximum Flooding Surfaces

Iraq Sea Level

Syria

Syria Lithostrat

SE Syria

From S. Z. Jassim and J. C. Goff, Geology of Iraq, 2006,

Syria Sequences

Syria Petroleum Systems

*Source/ reservoir/
seal columns*

Jordan (northeast)

Lithostratigraphy

From S. Z. Jassim and J. C. Goff, Geology of Iraq, 2006,

NE Jordan lithostratigraphy

Rutba Uplift (inter-regional)

"Rutba Uplift Developed in the area now representing W Iraq, NE Jordan, E Syria and NW Saudi Arabia."

From S. Z. Jassim and J. C. Goff, Geology of Iraq, 2006,

Turkey (southeast)

SE Turkey lithostrat

Southeast Turkey Petroleum Systems

*Source/ reservoir/
seal columns*

Iran

Zagros sedimentary basin (general)

Iran Petroleum Systems

Iranian Oil Fields Petroleum Systems

*Source/ reservoir/
seal columns*

SW-NW Iran Petroleum Systems

*Source/ reservoir/
seal columns*

Fars Province Iran Petroleum Systems

*Source/ reservoir/
seal columns*

Iran East

Zagros suture Zones

Data compiled from Fig. 16-3 in Jassim, S.Z. et al., "Geology of Iraq", 2006

High Folded Zone

High Folded Zone

LEFT side

High Folded Zone

RIGHT side

Balambo-Tanjero Zone

Balambo Tanjero Zone Tectonic Development

Qulqula-Khwakurk Zone

Penjween-Walash Zone

Penjween-Walash

Zone MIDDLE

Penjween-Walash

Zone RIGHT side

Shalair Zone

Zagros Paleozoic

Central Iran Paleozoic

Alborz Paleozoic (NW Iran)

Iran Sequences

United Arab Emirates

United Arab Emirates Lithostrat

United Arab Emirates Sequences

Oman

Oman Subsurface

Oman Subsurface Sequences

Oman Outcrop

Oman Outcrop Sequences

Oman East