

Letter to the Editor

The recent GeoArabia paper "Paleozoic petroleum systems of Saudi Arabia; a basin modeling approach" by M. Abu Ali and R. Littke (2005, v. 10, no. 3, p. 131-168) is very interesting and further progresses our understanding of the Paleozoic Petroleum System of the Arabian Plate. I have the following questions and clarifications that I hope the authors can address:

- (1) In Figure 1, it is not clear what well control is used for the Hercynian Subcrop Map. Do the open circles indicate actual Pre-Hercynian penetrations? Similarly on page 157 in paragraph 3, is the statement "... the Silurian section subcrops in the Safaniya and Manifa structures" based on well control or on seismic interpretation and/or regional trend mapping?
- (2) On page 134 in paragraph 6, should the "Upper Devonian shales" be "Lower Devonian shales" (i.e. Jauf D3B shales)?
- (3) On page 135 in paragraph 1, the Tukhman well is cited as a successful test of the Mid Qusaiba Sand (MQS). I believe the well that tested gas in the MQS was at Haradh (Ghawar), not Tukhman.
- (4) In Figure 9, should the yellow on the bar graph represent Qusaiba instead of Sharawra?
- (5) On page 150 in paragraph 5, the paper states that the Qusaiba "hot shale" is missing at the Jawb structure. However, the deep well on this structure did not penetrate the Base Qusaiba (ie the well TD'd within the Qusaiba), so the exact nature of the "hot shale" is unknown. However, I would infer that the "hot shale" is present here based on regional considerations.
- (6) On page 157 in paragraph 1, it is stated that "all the Ghawar Paleozoic reservoirs (Khuff, Unayzah, Jauf, Sarah) are hydrocarbon bearing where present". This might indicate that the Sarah would be a major reservoir in Ghawar, which it isn't. The Sarah has been penetrated numerous times in and around Ghawar, but has failed to yield measurable hydrocarbons on test.
- (7) On page 157 in paragraph 3, it is stated that "hydrocarbon migration risk is lower than in the areas where the Devonian and pre-Silurian sections are subcropping, like the Berri structures". According to Figure 1, the Silurian (Sharawra Member of the Qalibah Formation) subcrops the Khuff Formation at Berri field - not the Devonian or pre-Silurian succession.

Lawrence E. Wender
ExxonMobil Exploration Company
larry.wender@exxonmobil.com

Response by the Authors

We thank Mr. Wender for the comments on our paper and agree with the corrections in his comments 2 to 6. In regards to his first point, the 'Hercynian' subcrop map is based on seismic data and well control. The wells shown as full dots were used in the petrology and basin model study. The wells shown as open circles do not necessarily represent pre-Hercynian penetrations. Specifically, the Silurian subcrops shown at Safaniya and Manifa are model-driven and do not reflect actual well penetrations.

With respect to comment 7, the statement is correct for the other listed structures. The Berri structure should not have been listed.

Finally we note another error on page 154; the last sentence should read: "In this case, more mature petroleum with higher API gravity will be increasingly preserved than what was generated during an *earlier* stage of maturation" (*earlier* replaces *later*).

Mahdi Abu Ali
Saudi Aramco Exploration
mahdi.abuali@aramco.com

Ralf Littke
Institute of Geology and Geochemistry of
Petroleum and Coal, Aachen University, Germany
littke@lek.rwth-aachen.de

Letter to the Editor

Congratulations on achieving ten years of publishing GeoArabia and on receiving acceptance for its citation by Thompson Scientific. As an author of several papers on Saudi Arabia's geology, I have found GeoArabia's reviews to be very objective and important. Its professional editing, full-colour design support, and no-page-restriction policy is unmatched by other geoscience journals. Today GeoArabia is the most useful source of Middle Eastern geoscience developments.

Although GeoArabia, in my opinion, provides an effective means to disseminate information that is particularly relevant to this region, I have heard comments from certain colleagues that they would prefer to publish in a journal that has a higher potential of awareness than GeoArabia. The citation of GeoArabia in Thomson Scientific's data bases is an important new development that will certainly help to encourage such potential contributors to choose GeoArabia.

GeoArabia's worldwide accessibility was not, however, an issue for me as I could send reprints to interested geoscientists from the free 100 supplied by GeoArabia. In this regard, is it possible for authors to have an electronic (Acrobat PDF) version of their paper provided to them, for the purpose of sending it to interested geoscientists? This would provide a far more efficient way to share the information with, for example, delegates at specialist meetings, where the reprints would soon run out and may be collected by recipients with an insufficiently high interest level to actually appreciate the paper copy.

Finally, I am very pleased that two papers on the Khuff Formation were published in GeoArabia's Volume 10, Number 4 (Vaslet et al., 2005; Vachard et al., 2005). From my part I plan to submit a paper on the Khuff foraminifers from the Saudi Arabian subsurface that will provide a useful comparison with the work of Vachard et al. (2005).

Geraint Wyn Hughes
Saudi Aramco (geraint.hughes@aramco.com)

Reply by the Editor

Thank you for the kind letter and your congratulations on GeoArabia's tenth anniversary and citation. Your personal contributions over the ten years (and before GeoArabia in the GEO 94 Proceedings) have been a major contribution to the geosciences and the success of the journal. The importance of having GeoArabia cited in Thomson Scientific's data bases was emphasized by several editors in late 2004. Until then we did not realize that GeoArabia was supposed to formally apply to Thomson Scientific. Hopefully more authors will choose GeoArabia in the future.

GeoArabia routinely grants permission to authors to send electronic (PDF) reprints of their own papers to their specialist colleagues. GeoArabia has in several cases provided to some companies entire collections of papers authored by their staff for free distribution at conferences, bid rounds, etc. We have also released several Middle East stratigraphic charts to be added to the website of the International Commission on Stratigraphy. So please go ahead and send the electronic version of your papers to interested colleagues.

The two Khuff papers in GeoArabia Volume 10, Number 4, and two more in this issue (Crasquin-Soleau et al. 2006; Chirat et al., 2006) will be followed by several more on the Khuff, Dalan and Kangan formations. Most of these papers were initially invited by D. Vaslet and myself for publication as GeoArabia Special Publication 4. The project however proved too difficult to coordinate into a book format. Perhaps once all these papers are published then they can be reprinted as a synthesis on the regional stratigraphy of the Permian and Early Triassic Period.

Moujahed I. Al-Husseini
Editor-in-Chief, GeoArabia (geoarabi@batelco.com.bh)