

Petroleum Plays and Systems in the National Petroleum Reserve – Alaska (NPR), by **D.W. Houseknecht (ed.)**, 2001. **SEPM Core Workshop No. 21. SEPM Society for Sedimentary Geology, 1741 E. 71st Street, Tulsa, OK 74136-5108, USA; 230 pages, paperbound; US\$ 50.00 (members), US\$ 70.00 (non-members); ISBN 1-56576-080-8.**

The National Petroleum Reserve – Alaska (NPR) is a significant part of the North Alaskan petroleum province that is estimated to contain more than one third of the undiscovered petroleum resources of the United States. The NPR lies to the west of the super-giant Prudhoe Bay field and is, although probably not as prospective as the Arctic National Wildlife Refuge (ANWR) to the east of Prudhoe Bay, increasingly attracting the explorationists' attention. This prompted SEPM to organise a core workshop using publicly available data at the AAPG/SEPM Denver (2001) Convention; this book forms the workshop notes.

The workshop notes consist of 13 papers that describe the geology, petroleum systems and play concepts of the NPR. The data presented were mostly acquired by the US Federal Government prior to opening of the reserve to exploration by private companies in 1982. Available data are widely spaced 2-D seismic lines, cores and logs from a handful of deep test wells as well as outcrop studies. Though the title of the book implies a strong focus on the petroleum systems of the area, most of the papers are long on very traditional descriptions of lithologies and the stratigraphic setting and short on petroleum geology aspects. Sedimentological and sequence-stratigraphic interpretations are presented in most of the papers but are essentially merely postulated – not coherently argued. One favourable exception is the paper by Robison & Dawson: 'Lithofacies, organic geochemistry, petrology, and sequence stratigraphy of the Ellesmerian sequence: integrated analyses of Tenneco Phoenix #1 cores, North Slope, Alaska', in which the sedimentological interpretation of the cored sequence is convincingly argued.

A surprising feature of the book is that there is no evident logic to the order of the papers with, for instance, a paper on the Middle Cretaceous Torok Formation separating papers on the Mississippian Endicott Group and the Devonian and older basement complex. Presenting the papers in either ascending or descending stratigraphic order would have made it easier to obtain a clear overview of the area's geological development.

Technical editing is overall of a good standard for a set of workshop notes with few typos in the text. Figures are a bit more of a mixed bag with, for instance, Figure 4 on p. 24 being barely legible and most of the black & white core photographs (e.g., Figure 6 on p. 28) being singularly non-informative. The only major editorial glitch in the figures is on p. 174, where the caption for Figure 5A is printed twice – once across the core photos and once at the bottom of the figure.

So what's my overall opinion about this publication? If you are interested in getting a quick update on basic geological data for the National Petroleum Reserve – Alaska, this is a good buy! I guess, however, that this limits the target audience to staff of those companies that are considering to actively explore for hydrocarbons in the NPR. If you do not foresee any such involvement, I see no reason for getting your own copy of these workshop notes.

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