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[A discussion on the genetic aspects of the Malanjkhand copper deposit has appeared earlier in the Journal (v.57, 2001, pp.550-558). The above discussion is the second on the topic and discerning readers will arrive at their own conclusions. Further discussion on the topic is closed. –Ed.]

SEDIMENTOLOGY AND SEQUENCE STRATIGRAPHY OF HYDROCARBON BEARING MANDAPETA PAYS: A BRAIDED FLUVIAL RESERVOIR, KRISHNA-GODAVARI BASIN by Yadagiri Kotha, Jour. Geol. Soc. India, v.60, no.3, pp.249-270.

V. K. Rao, Directorate General of Hydrocarbons, Ministry of Petroleum, New Delhi, comments:

The author has identified three genetic units, viz., channel lag, in-channel and over bank acrretions in the Mandapeta Formation and has described in detail the petrophysical and petrographic characteristics of hydrocarbon bearing sands.

However, no map/illustration showing geographic distribution of these genetic units/facies in the study area is included in the paper. Rather a time structure map on top of Mandapeta Formation is shown (Fig.3), which has less relevance to the main theme of the paper. Thus, the conclusion drawn by the author that the area to the west and southwest of Mandapeta (without Mandapeta location) is speculative and lacks credence in the absence of a descriptive/demonstrative map.

Yadagiri Kotha, ONGC, Jorhat, Assam replies:

At the outset I would like to thank Dr. V.K. Rao, Directorate General of Hydrocarbons, Ministry of Petroleum, New Delhi for evincing keen interest in my paper. Point-wise reply to the issues raised by Dr. Rao are as follows:

1. This is first ever integrated sedimentological analyses of the complex and the oldest petroleum system that has rightly been described. The only culmination is around MD-A, G and H having a major palaeo-channel possibly resulted in better sorting as compared to other areas of the field which favoured the hydro-carbon entrapment. In a fluvial braided depositional realm, a map depicting the geographic distribution of genetic units resulting from complex milieu of sedimentation is rather difficult. To quote Andrew Miall (1996) is befitting in this context. He is not only the doyen of fluvial sedimentalogy but also versatile in other fields of earth sciences. He concedes in his widely acclaimed book on Fluvial Deposits that the ancient fluvial deposits are very difficult to map. Reconstruction of closely spaced outcrops and/or

subsurface sections seems to be near impossible due to extreme magnitude and scale of channel hierarchy. This is also true in the case of Mandapeta field.

2. Nevertheless, in the author's view, a close grid, systematic, extensive and continuous coring in some planned wells would help to some extent in bringing out such a map. But the question is of available core length. To cite one example, for diagenetic characterization of offshore Barremian hydrocarbon bearing sandstones in South Gabon basin, West Africa, the coring density in each well was 420 m, 141 m, 260 m and 163 m (Giroir et al. 1989).
3. Although the main theme of the paper is in the field of sedimentology, the author's effort has been to provide a semblance of synergy and holistic data integration for a meaningful interpretation of the geoscientific problem. Working in a compartmentalised and divisionistic fashion would no longer be tenable in this era of synergy. With this urge, the inclusion of time structure map is a value-addition and is useful for a varied cross section of geoscientists. I hope that this reply answers all the queries of Dr. Rao. Therefore, the conclusions drawn in my paper are in the right perspective and are relevant.

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PHENOL – AN INDICATOR FOR GROUNDWATER POLLUTION BY INDUSTRIAL EFFLUENTS IN DURGAPUR, WEST BENGAL by S. Mahapatra, M. Mahapatra and B. Mondal. Jour. Geol. Soc. India, v.59, 2002, pp.259-263.

S. Das, c/o Dwaipayan Das, 104 Koramangala Industrial Estate, 5th Block, Bangalore - 560 095, comments:

On going through the above article I find some incongruities in their statements which I am discussing below:

1. A perusal of Fig.3 shows a groundwater divide trending NW-SE and running from Kamalpur to Saratpalli and beyond between Arra and Namosagardanga. Groundwater samples from Birja, Dhabani, Shibpur, Malangdighi and Jemua, located on the northern side of the groundwater divide, should not be influenced by the polluting sources 'S_1' and 'S_2' lying on the southern side of the divide. The same is true of the groundwater samples from D. Bandhunagar and Waria lying upgradient from the polluting source 'S_1'.
2. The concentration of the pollutant decreases with increasing distance from the polluting source with more and more recharge in the groundwater flow direction. Further, phenol is likely to be adsorbed by the clayey and silty materials in the sedimentary sequence. Hence influence of the polluting sources S_1 and S_2 at distances of 11 to 18 km is unlikely.

   It is possible that there are other sources for phenolic compounds like coaliferous or carbonaceous deposits occurring below the Neogene sediments in the eastern extension of the Raniganj coalfield.
3. The polluting industries (S_1 and S_2) are located over compact and hard Durgapur beds below a thin cover of soil or alluvium. Hence the scope of extensive pollution through Durgapur beds appears to be rather remote. The major pollutant load may be discharged through local *nalas*, streams. Larger scale maps around the polluting industries will give a better picture of the pollutant movement. Such industries (or point sources of pollution) do have influence on pollution of groundwater, but locally around the industries.
4. Table 1 lists the groundwater samples with their locations, but excludes the sources of water samples – dug wells (unconfined shallow zones), tube wells (deeper confined zone) and depth ranges. After all, the entire sedimentary sequence of several hundred metres cannot be polluted.
5. The authors have not shown the City Centre on the map. The city centre is located right over the Durgapur beds of Jurassic age, which are generally hard and compact. How the authors have correlated the weathered upper parts of Durgapur beds, as