GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

RECORDS
OF
THE GEOLOGICAL SURVEY OF BANGLADESH
Volume 5
Part 5

PETROGRAPHY OF THE SAND SAMPLES OF THE BRAHMAPUTRA-JAMUNA RIVER BARS

by
MOONIRA AKHTER CHOWDHURY

Geological Survey of Bangladesh, Dhaka
1989

ABSTRACT

The Brahmaputra-Jamuna is a very large sand-bed braided river and involves a hierarchy of bed forms on a wide range of scales. The sediment product of the river is about 900 million tons annually.

Sand bars and point bars of different sizes usually occupy about 50% of the channel, which shift rapidly.

The area under investigation lies between the confluence of the Dharla and the Brahmaputra-Jamuna at Kurigram that of the Karatoya and Brahmaputra-Jamuna at Sirajganj. A total number of 167 samples of sediments were collected from the sand bars and point bars of the area. The depth from which samples were collected ranged between 30 and 45 centimetres. Out of these 167 samples, 71 were selected for detailed textural studies and 25 were processed for mineralogical studies.

On an average, the sand is fine grained and moderately well sorted. This sand may be an important source for construction material. Morever, this may also be suitable for use as a stowing sand in the coal mine likely to be developed in the north western zone of Bangladesh.

The weight percentage of the bromo-light minerals varies from 85—95%. This fraction contains mainly quartz and feldspars.

The weight percentage of the bromo-heavy minerals are from 5--15%. The most common minerals in this fraction are opaque minerals, pyroxene and amphibole. A considerable amount of zircon and garnet and a little amount of monazite and rutile are also present in the sand. These minerals may be of economic importance and as such may warrant detailed studies for exploitation in future with the advancement of technologies appropriate for such deposits.