

# FOCUS

## Oil and Gas Exploration in Bangladesh: Promises and Perils

by Two Concerned Bangladeshis

*Natural gas reserves in Bangladesh offer the country a rare opportunity for unprecedented economic growth and prosperity. However, unless this resource is utilized with care, the danger of squandering the opportunity is real*

A large number of foreign companies, including some of the largest oil companies in the world, have bid for exploration/production opportunities in Bangladesh. Estimates of gas reserves range from 30 to 80 trillion cubic feet (tcf). At two US dollars per cubic foot it is worth 60 to 160 trillion US dollars. If proven, these reserves will be larger than those of either India or Pakistan.

This article briefly discusses several issues that appear relevant to the present situation. The authors hope that it will contribute to a dialogue that is absolutely essential to help the country choose a prudent course of action. The stakes are high and the gas reserves offer Bangladesh the opportunity to surmount the enormous economic hurdles she faces.

### Key Exploration and Production Issues

**Negotiations on a Block with Multiple Companies:** This is likely to increase the competitiveness of the offers by the bidders and help the government evaluators to judge the reasonableness of the estimates, for example, of potential reserves. However, the process can be time-consuming and lead to fragmentation. The following considers an alternative which may be better in the context of the present situation.

### Consolidated Partnerships

The current block by bidding and proposal process appears to have generated considerable controversy and confusion. However, the alternative proposed by some to award them multiple blocks may create monopolies that are not beneficial to the country. Consequently, oil companies who perhaps are currently competing against one another should be asked to form partnerships encompassing a number of blocks in each partnership. Several benefits will accrue:

- It will help provide a committed and sustained investment.
- It will reduce/eliminate the current spectacle of propaganda, intimidation, conspiracy theories, allegation of influence-buying, etc.
- This will result in fewer production sharing contracts (PSCs) for the government to manage, thereby minimizing the strain on regulatory and oversight bodies.

The companies also benefit from such a partnership. It makes a project large enough to allow them to commit substantial resources while spreading the risk.

Partnerships suggested here have existed elsewhere in the world for quite some time. One example is WAPET (Western Australia Properties) between Shell, Chevron, Texaco, and Mobil. Similar partnerships exist on North Sea exploration and production where not only

several companies but several countries are involved.

**A Systematic Oil Exploration and Production Schedule:** An exploration and production (E&P) schedule for the whole country should be established. E&P should be planned, systematic, regulated, and phased in with the country's economic development and resource utilization plans. The issue of exporting the gas should be considered very carefully.

**A Complete Plan:** Each partnership should provide an agreement that clearly delineates plans for exploration, development, production, and abandonment of a lease. The associated safety issues, environmental impact, and remedy measures must be clearly defined in sufficient detail. These are discussed next.

### SAFETY ISSUES

Gas production can be risky undertaking as evidenced by the recent accident in northeast Bangladesh. Procedures must be put in place to prevent such accidents and mechanisms must be defined to mitigate their effects if accidents do happen.

### ENVIRONMENTAL IMPACT

Environmental contamination may occur in activities ranging from disposal of drilling fluids to disposal of well hardware upon abandonment of a lease. A simple example of a serious environmental impact would be the disposal of produced water that may contain radioactivity in harmful quantities. The radioactivity can contaminate the ground water and enter the food chain leading to human consumption and remain a threat for centuries.

These issues are particularly important in Bangladesh since much of the oil/gas exploration and production will take place on agricultural land or near densely populated areas.

In addition to disposing of the water containing radioactivity, the borehole hardware must be disposed of in a safe manner to protect the workers.

All major oil companies have programmes to address safety and environment issues and Bangladesh can benefit from their experience. In addition, regulatory framework is either in place or is being developed in Western countries to address environmental issues on a continual basis. For example, the US Environmental Protection

Agency (EPA) established effluent limitations guidelines on discharging produced water almost twenty years back. Bangladesh can adopt similar regulations.

### ABANDONMENT

All wells and the associated structures such as platforms will have to be ultimately abandoned as their economic life ends. Companies must have a plan to address this issue and share the cost. The sea could be littered with abandoned platforms. The cost of platform disposal could run into hundreds of millions to billions of dollars.

### Minimisation of Land Use

Much of the onshore exploration will take place on fertile agricultural land or near densely populated areas. Land is scarce in Bangladesh and drilling a large number of wells will take away valuable land from other usage, such as food production. However, technology now exists to significantly reduce the number of wells by drilling extended-reach wells.

Extended-reach wells can also be valuable for accessing offshore reserves from onshore or with fewer offshore structures and with a reduced environmental impact. In California extended-reach wells are used to explore ecologically sensitive

tideland areas with strict controls exercised by the State Lands Commission.

### Stakeholder Involvement

Since oil/gas E&P on the scale being proposed in Bangladesh can have a major environmental, land use, and social impact, stakeholders at different levels, including local governments and NGOs, should be included in project planning and should be kept informed at various stages as the project develops. Failure to do so forced a major oil company to abandon a large petroleum exploration project in the rain forest in Ecuador in 1991. The company had discovered 200 million barrels of oil and proposed to build a pipeline through virgin rain forest.

Although the issues can be complex, they can be addressed adequately with appropriate planning. This will allow the country to derive enormous

benefits from the socioeconomic and infrastructure investments that many oil companies make in schools, hospitals, water purification systems, etc., in addition to the benefits that arise directly from the exploration and production.

### Appropriate Regulatory Bodies

In order to get the maximum economic benefit, monitor compliance with the terms of the PSC's safeguard the public, protect the environment, and minimize use of scarce land resources, appropriate regulatory bodies, such as the US EPA or the California Land Commission may need to be established. In some cases a legal framework and an enforcement mechanism may have to be created to deal with these issues.

### Technology Transfer Plan

Technology transfer plans should be geared to: 1) increase local participation in operations and management, 2) enhance local E&P capabilities, and 3) lead to growth of advanced research and development (R&D) in the country.

A petroleum industry project, from exploration to abandonment, uses a vast array of technical and scientific disciplines. Growth of advanced R&D in these areas will be very beneficial to the country. This can perhaps be best achieved by strengthening the Bangladesh Petroleum Institute,

possibly with industry partnership, and with participation from local universities and research institutions.

### Choice of Operators

From news reports it appears that several major oil companies and small/medium independents have made bids for different blocks. While independents can provide certain advantages, the majors bring enormous resources in terms of funds, advanced technology, expertise, training of host country personnel, and R & D that others are unlikely to match. Also, large companies are in a much better position to handle the issues discussed above, with their associated complex safety, environment, and social aspects. Thus it will be preferable to have major companies lead consolidated partnerships.

### Conclusions

Natural gas reserves in Bangladesh offer the country a rare opportunity for unprecedented economic growth and prosperity. However, unless this resource is utilized with care, the danger of squandering the opportunity is real. The present discussion points to the need to address a number of issues to harness this resource beneficially. A national dialogue on and discussion of these and other issues, free from foreign interference, inducements and intimidation, is essential to choose the best course.

The authors are oil and energy experts, with more than two decades of experience working in the industry and are now living abroad.

## HEALTHCARE

### Towards Achieving the 21st Century Goals

by Nafis Sadik

PERSONAL health and well-being is the baseline indicator for sustainable development. An integrated approach to social development is essential for achieving universal health: goals in one area of social development can be reached only by parallel action towards all goals.

One of the major challenges of the 21st century, therefore is to meet the social and economic needs of a rapidly growing population in such a way as to reduce inequities between developed and developing countries, and to improve the quality of life in developing countries in a sustainable fashion.

To face this challenge, more resources are needed, not only in the form of public expenditure but also by forming partnerships with the private sector, non-governmental organisations and international agencies. It is also critical for industrialised countries to recognise that essential levels of aid and technical expertise to developing countries, in the area of healthcare is crucial for sustainable development and a more equitable world.

By United Nations projections, world population is likely to grow from the current 5.9 billion to between 7.7 billion and 11.1 billion people by the year 2050, with the most likely projection considered to be 9.4 billion. The overwhelming majority of this growth will occur in the developing countries. Countries which today are strapped for resources to deal with the problems of providing adequate healthcare, food, housing, water and sanitation for the poor and marginalised, are going to find it even more difficult to cope with the demands in the future.

Bangladesh, with a population of 121 million and a GDP per person of only \$226, has shown how political will and individual tenacity can bring about positive change in the lives of everyday people. Twenty years ago outsiders saw very little achieved in Bangladesh. However, a collaboration between the government, non-governmental organisations and international donors has given Bangladesh a second chance.

By implementing educational and developmental programmes, the government has managed to curb population growth. Twenty-five years ago

the contraceptive prevalence rate was only 7 percent, today it is 50 per cent. The fertility rate has dropped from 7 to 3.3. Bangladesh has also succeeded in lowering the death rate.

Despite many calls on scarce resources, the country has been able to increase access to reproductive health and family planning information and services. Innovative educational programmes have enabled girls and women to escape from illiteracy and find alternatives to early marriage and constant childbearing. Educational expenditures in Bangladesh have increased from 9.4 per cent of government spending during 1973-78 to 13.6 per cent during 1990-1995.

Another important form of partnership is technical cooperation among developing countries. Bangladesh is one of the few countries in a Partnership in Population and Development Initiative launched in 1994 to promote the exchange of experiences and the development of regional training institutions.

As someone who has spent

an entire life dedicated to public health, I cannot emphasise enough the value of human-centred development which has been recognised by the world community as the single most important factor in a country's drive to achieve sustained economic growth and prosperity.

I was Secretary General of the International Conference on Population and Development (ICPD) 1994, and I am proud of the firm consensus of 179 nations on population and development that the conference produced. The ICPD was the only international conference of the 1990s to agree on the resources necessary to achieve its goal.

The ICPD Programme of Action includes a set of specific objectives for all countries: Universal access to reproductive healthcare including family planning and sexual health by the year 2015.

Universal access to primary education by 2015; countries should try to close the gender gap in primary and secondary education by 2005.

The World Health Organisation's unique structure should enable it to respond to regional needs and capacities while maintaining a global perspective. There must be a close and dynamic partnership between the regions and the centre, driving from a common purpose and with due attention to regional and national priorities.

Determination to achieve the highest quality with the greatest economy of human and financial resources will be the hallmark of this approach. WHO must examine its structure and operations with this objective in mind. The process of self-examination has already begun. Some of the resulting proposals have already produced movement towards reform.

In a world where nations have been brought closer together through trade and technology, human suffering from disease and poverty cannot be ignored. Clearly more has to be done to make basic health services available to all. Only a concerted effort by all the partners: governments, international agencies, non-governmental organisations, health-care personnel and the private sector can guarantee health for all in the 21st century.

The author is Executive Director of the United Nations Population Fund

Infant mortality rate below 35 per 1000 live births and an under-five mortality rate below 45 per 1000 by 2015.

Reducing maternal mortality rates by one half of the 1990 levels by the year 2000 and halve it again by 2015.

Increasing life expectancy at birth to 75 years or more by the year 2015.

International agencies will continue to play a vital role in helping countries to meet their objectives in people-centred development. In the area of health, the World Health Organisation has the mandate to be the leading agency.

Health for all is the institutional goal of the World Health Organisation. WHO must equip itself to perform its intended function as the international leader in health issues, stressing its comparative advantage as an active partner, first in a reformed and responsive United Nations system; and second, among health-related organisations in both public and private sectors.

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## BANGABANDHU MURDER CASE

### Verbatim Text of Cross Examination of 37th Prosecution Witness

Cross-examination of PW-37 M Reazul Huq, an engineer of Bangladesh Betar, in the Bangabandhu murder case was held on Sunday.

Following are the excerpts from Reazul Huq's examination by advocate Sharfuddin Mukul, defence counsel for Taheruddin Thakur:

Q: Are you still in service?

A: Yes. Since 1965.

Q: Bangladesh Betar is a government organisation.

A: It is the government-owned broadcasting media.

Q: All the employees of Betar are government employees.

A: Yes.

Q: It is under the Ministry of Information.

A: Yes.

Q: Bangabandhu Sheikh Mujibur Rahman was the head of the government on August 14, 1975.

A: Yes.

Q: He had a cabinet.

A: Yes.

Q: Taheruddin Thakur, as an elected MP, was the state minister for Information in that cabinet on that day.

A: Yes.

Q: Did you know him personally?

A: Yes.

Q: He (Thakur) was a renowned journalist.

A: Yes.

Q: Government administrative machinery was functioning on that day at the Bangladesh Betar.

A: It was not normal.

Q: There were armed forces in the country on August 14.

A: Yes.

Q: There had chiefs.

A: Yes.

Q: On August 14, Major General Shafiqullah, Rear Admiral MH Khan and Air Vice Marshal AK Khandaker respectively were the chiefs of Army, Navy and Air Force.

A: Yes.

Q: On August 15, they came to Betar and their voices were broadcast.

A: Oaths of allegiance were broadcast.

Q: Bangladesh Betar had its own organogram.

A: Yes.

Q: The transmission centre was at Shahbagh and the head office was also there.

A: The transmission centre was at Shahbagh and the head office was at Road-2, Dharmomdi.

Q: What was the designation of the head of Bangladesh Betar?

A: Director General.

Q: Who was DG on August 15?

A: Amiruzzaman Khan.

Q: Who was the head of the broadcasting centre at Shahbagh?

A: Regional Director Ashfaqur Rahman.

Q: Who was next to Ashfaqur Rahman?

A: Under the regional director, there were three departments - Engineering, Programme and News.

Q: Who were the chiefs of those departments?

A: Syed Mohammad Shakur was the chief of engineering department and Ashfaqur Rahman of programme. I cannot recall the name of the chief of news department.

Q: Whose responsibility is it to record and broadcast speeches?

A: Engineering department is in charge of recording and the programme department of broadcasts.

Q: Normally any speech or announcement which will be broadcast remain in schedule.

A: In normal times, those remain in schedule. I cannot recall the name of the chief of news department.

Q: Are those registered?

A: Entry takes place on U sheet.

Q: Where the speeches are

recorded?

A: On tape. Language of the speech is not recorded in any register.

Q: Normally the whole programme of a day's broadcast comes in printed form the following day.

A: Yes.

Q: Betar Bhaban is a protected area and has its own security arrangement.

A: Yes.

Q: What was the arrangement for outsiders to contact with anyone working at the Betar Bhaban?

A: By telephone.

Q: What was there in Bhaban?

A: Transmission centre.

Q: While switching on the transmission at the beginning of a day, you require permission from the higher authorities.

A: No.

Q: What was the scheduled time to begin transmission on August 15, 1975.

A: 6:30 am.

Q: How long the first session of transmission continued during those periods?

A: I don't remember. But the second session used to begin at 12 noon and continue up to 3 pm while the third session was from 4 pm to 11:30 pm.

Q: Both the technical and non-technical staff had same type of shifting duty.

A: No, they had different duty hours.

Q: What were the duty shifts of the technical persons on August 15 at the Shahbagh station?

A: From 6 am-2 pm, 2 pm-10pm and 10pm-6am. Non-technical people had no shifting duty. Only one person remained on duty to monitor the programmes by rotation.

Q: Those on night duty had arrangements to stay at the Betar Bhaban.

A: Yes.

Q: Where was your residence on August 15?

A: At Indira Road. I used to live in a mess.

Q: How were you picked up for the office from your residence?

A: By car.

Q: How many of you used to go by that car?

A: Four.

Q: When were you picked up on August 15?

A: At about 5:30 am.

Q: Was there a road on the western side of Betar Bhaban?

A: Yes.

Q: When did you arrive at Betar Bhaban?

A: At about 5:45 am.

Q: There were two gates at Betar Bhaban on the roadside.

A: Yes.

Q: You didn't see the security men at Betar Bhaban after going there.

A: I didn't see policemen there.

Q: You had seen two trucks of Rakkhi Bahini.

A: Yes.

Q: Who used to normally guard the Betar Bhaban gate?

A: Police. There was a reception near the gate and police used to stay there.

Q: Who stays in the control room of radio station?

A: Engineering staff.

Q: On that day, Pranab, Mohammad Ali and Anwar were on duty.

A: Yes, but I didn't see them.

Q: You were in the control room on that day up to 7 am.

A: Yes.

Q: After that you went to booth-2.

A: Yes. I went there after 7 am.

Q: Was any announcement made on that day before your arrival? If so, you were not present there.

A: I heard the announcement from the control room.

Q: Was that the first an-

nouncement about the incident.

A: I don't know.

Q: Did you submit any document, note or anything in writing to the IO?

A: No.

Q: Did you submit any document or anything in writing to the court while you came here to give statement.

A: No.

Q: Did you come across with any non-technical staff when you went to the control room or the booth?

A: No.

Q: Was regional Director Ashfaqur Rahman or anyone from the news department there?

A: No.

Q: What was the time of news transmission?

A: 7 am.

Q: Was it possible to broadcast news without your knowledge?

A: No.

Q: On that morning, Sarkar Kabiruddin was scheduled to read news.

A: Yes.

Q: Did you listen to the news read by Sarkar Kabiruddin?

A: No.

Q: On that day, Sarkar Kabiruddin read the news at 7 am and it was broadcast.

A: I didn't remember.

Q: Did you make any entry in the register about the announcement which was broadcast?

A: It was recorded on tape.

Q: In your statement, you have mentioned the text of that announcement from your memory.

A: I stated the summary of the announcement from my memory.

Q: Did you hear the same thing from the booth as you heard the announcement from the control room?

A: Yes.

Q: Can you say the entire text of that announcement?

A: I told the summary of the announcement from my memory.