Iraqi contractors, operators look to the future

IADC SOUTHERN ARABIAN Peninsula Chapter sponsored a one-day conference in March to discuss an operator's perspective of Iraqi oil and gas field developments.

Speakers at the conference included the director general of the **Iraq Drilling Company** as well as the assistant director of **Exploration Oil Company**, and representatives of **North Oil Company** and **South Oil Company**.

The conference was initiated by Chapter Chairman **Mike Derbyshire** with **Pride International** with the intent of advising Chapter members and a limited number of other oil industry representatives of the present status of Iraq's oil and gas industry. Also discussed were the country's most immediate requirements for assistance in terms of investments and services and a vision of potential future developments.

The conference was attended by 60 people representing various companies. Each company representative was also allowed a 20 minute private face-to-face meeting with the delegates from Iraq to present the company's products and services and to develop follow-up actions and appointments in Iraq.

The Iraqi companies were also extended 2004 memberships in IADC and its Southern Arabian Peninsula Chapter.

REBUILDING CAPABILITIES

Dr Muhammed Abed Mazeel Al-Aboudi, Director General, **Iraq Drilling Company (IDC)**, discussed efforts to rebuild the industry's capabilities in the country during a presentation entitled *Options for Developing a Long Term Sustainable Iraqi Oil, Gas and Refined Oil Industry*.

IDC was established in 1990 and specialized in drilling and workover operations. By the beginning of 2003, before the entrance of coalition forces, the company was operating 40 rigs. IDC also operated specialized shops for rig maintenance as well as associated equipment and support facilities for the rigs.

He said that as a result of the latest war, on-going destruction, plundering and looting has resulted in only about 20% of the company's capacity remaining.

In order for IDC to return to its normal capabilities necessary steps have been taken to prepare the needs and requirements to reconstruct the company during three phases.

These phases were devised with the US company **KBR** according to the infrastructure forum for the oil sector held in July 2003.

A transitional plan was undertaken to reconstruct the company in light of the available abilities at the end of 2003. By that time, only three drilling and five workover rigs had been rehabilitated and back to work in the country.

During the next five years, IDC hopes to have as many as 33 drilling rigs and 15 workover rigs operational in Iraq.

The Iraqi delegation to Iraq: Oil & Gas Field Developments - The Operator's Perspective, was headed by Dr Muhammed Abed Mazeel Al-Aboudi, left. With Dr Al-Aboudi, from left, are Norman V Edwards, IADC Director of Operations, Middle East and Asia; Honer Badi M Nazhat, Assistant Director General, Oil Exploration Company; Lester Carson, Secretary, IADC Southern Arabian Peninsula Chapter; Dr Muwafak Adeeb Abdul Salam Al-Samadi, Fields Director, North Oil Company; Haian A Abdulzahra, Project Director, South Oil Company; and Mike Derbyshire, Chairman, IADC Southern Arabian Peninsula Chapter.

KEY FINDINGS

Dr Al-Aboudi said options available to Iraq to put its oil and gas production and transmission segments in addition to the downstream oil industry in a modern, workable and sustainable footing will focus on three time periods. Those periods include the short-term rehabilitation phase already in progress, the medium-term transition and the longer-term transformation phases.

However, he noted, neither the natural gas nor downstream oil provide the level or return on investment available from upstream oil although they will play a critical role in the development of the overall Iraqi economy.

"Perhaps more importantly," he said, "these sectors simultaneously hold the potential for creating great wealth if managed, or the potential for siphoning off vast amounts of scarce resources, if managed unwisely."

If Iraq today were to convert five of its major power plants, which were originally built for gas, to burning natural gas rather than liquids, and to export the liquid fuel these plants would otherwise have consumed, it would earn approximately $1 billion in additional revenue per year.

Add to that the $5.2 billion the country loses annually from selling refined products below cost, it is easy to gauge the potential benefits to Iraq as the country transitions to a well-managed and sustainable oil and gas industry.

Dr Al-Aboudi said that oil production scenarios over the next 5-6 years range from a decline in 2008 in the 500-750 thousand barrel per day range up to enhanced production of more than 6 million b/d.

He noted that it would take $4-$5 billion just to restore oil production and up to $15 billion or more to raise output to the 5 million b/d range.

Dr Al-Aboudi also said there are some concrete steps that can be taken in the upstream natural gas sector during the rehabilitation phase that can materially improve the sector in the short term.

He also said that even without major reform in the overall constitutional and legal environments, moving quickly on managerial and operational policies can create the possibility of a more rapid transformation later.

"Business practice improvement, especially in procurement and contracting, staff skills and budgeting can set the groundwork for significant efficiencies once the volume of business grows."

He noted four key questions related to rehabilitation of the country's oil and gas industry, and that all likely will be addressed during the transition phase:

• Who finances restructuring and expansion;

• How will contracting and legal issues be addressed;

• How fast can production ramp up;

• Who will undertake the activities.

Dr Al-Aboudi said that unlike either the upstream oil and gas activities, the downstream oil sector "has the potential to be, at best, mildly productive for the economy and, at worst, a significant drain."

He noted that when consumer prices are based on market levels and infrastructure in the downstream sector is modern, relatively sophisticated and well maintained, then it is possible to obtain a return on capital in the 10-15% range.

However, he said, if consumption is heavily subsidized, equipment is inefficient and infrastructure poor, then the potential losses can be significantly larger than any potential upside.

"At present in Iraq," Dr Al-Aboudi said, "a system of very low prices combined with poor refinery yields and restricted import/export facilities is probably resulting in annual economic looses in excess of $5 billion and direct financial losses of about $2 billion per year."

By far the most significant finding, Dr Al-Aboudi noted, was that changing to market-related prices in Iraq could result in a breakeven financial situation in downstream oil within 12-18 months, cutting current economic losses by about $2 billion annually.

"Under such a market-related scenario," he said, "prices would not need to be raised to free-market levels to eliminate Iraq's financial losses in the sector, just to about 50% of world levels."

NORTH OIL

North Oil Company (NOC) operates in the northern half of Iraq bordering Iran, Turkey, Syria and Jordan and in which the Kirkuk field played and continues to play an important role in the oil production plans of the company.

Dr Muwafak Adeeb Abdul Salam Al-Samadi, Fields Director for North Oil Company, said that with the drop in production in the Kirkuk field from 1.4 million b/d in 1979 to about 300,000 b/d at the beginning of 2004, there is no one field that can substitute for the loss in production experienced by the Kirkuk field within the foreseeable future.

Dr Al-Samadi made his remarks in a presentation during the conference entitled *North Oil Company/Iraq, Past, Present and Future Prospects*.

He noted that a possible 100,000 b/d increase in production could occur during 2004 with the commissioning and operation of a wet crude treatment project in the Baba Dome area of the Kirkuk field in conjunction with continued drilling, workover and production of new wells.

The completion and operation of the early production scheme from the Khurmala Dome, which constitutes the third dome in the field, should add about 35,000 b/d in the first half of this year, bringing the production capacity of the Kirkuk field to approximately 450,000 b/d by the end of 2004.

The rest of the developed fields in the North Oil Company operating area will contribute as much as 350,000 b/d by the end of 2004 if the planned drilling and workover and water injections projects are completed according to the current schedule.

With the production increases in various areas, NOC's area of operation could be producing on the order of 750,000-800,000 b/d by the end of 2004.

The plans already adopted by NOC include:

• Enhancement and maintenance of oil production capabilities of developed oil fields through workover, drilling and supplementary facilities and projects;

• Development of the Khurmala and Hamrin fields to produce about 160,000 b/d of oil through drilling, workover, completion and surface facilities;

* Evaluation and delineation drilling in the Qumar, Gillabat Khashim Al-Ahmer, Naoduman, Qara Chauq, Ismail, Sergon and Allan oil fields;

• Further delineation of the East Baghdad field;

• Pilot projects in heavy oil fields aimed at enhanced recovery through tertiary projects to prepare for the development of heavy oil resources;

•Screening, field testing, evaluation and pilot projects to arrive at the most feasible method of increasing the oil recovery factor from the Kirkuk field from water flooded areas. Such work is worthwhile in light of the huge volumes of oil left in water flooded zones in the field;

•Exploration through seismic surveys and drilling activity to add new reserves to NOC's operating area.

SOUTH OIL

Dr Haian A Abdulzahra, Project Director of **South Oil Company (SOC)**, quoted official Iraqi estimates of damage since coalition forces entered Iraq in March 2003, which included sabotage, looting and other acts after the war.

The damage ranged from 43-55% of flow and trunk lines to 96-99% in production and water injection stations.

By the end of 2003, he said, much had been done to improve the situation and oil availability was 1.9 million b/d with a projected sustained production level of 2 million b/d.

Future plans include the completion of reconstruction and rehabilitation of existing production facilities and upgrading of company performance through the development of existing facilities, upgrading infrastructure and improving employees and environmental conditions.

Future plans also call for upgrading the production rate to 3 million b/d through development of the Majoon, West Qurna, Halfaia, Ratawy, Karaf, Nhr Ben Umar, Nasrriya and Tuba oil fields and the Seeba gas field.

Additional plans call for utilizing natural gas from existing and future field including gas gathering from existing developed fields; drilling and completion of 886 oil wells; and the addition of wet crude oil treatment units to the existing degassing banks.

Plans also call for the upgrading of existing oil depots and addition of new oil depots; reconstruction and upgrading of oil terminals and storage centers; and implementation of water injection facilities for West Qurna, Majnoon, Janubia Mishrif and Missan oil fields.

EXPLORATION OIL COMPANY

Honer Badi M Nazhat, Assistant Director General, **Oil Exploration Company**, outlined his future vision for Iraq, estimating it will cost $1 billion over the next 10 years for exploration activities.

This includes six 2D and three 3D seismic crews operating per year.

Exploratory and delineation drilling is the primary item in the plan, with an average of 10 rigs running per year to drill 200 exploration and delineation wells targeting oil bearing reservoirs and 50 exploration and delineation wells targeting gas bearing structures.

Mr Nazhat envisions involvement of international oil companies, drilling contractors and consultants utilizing technical assistance agreements with major oil companies, training agreements and joint venture companies established. ■