

INCREASE IN DOWNSTREAM PROJECTS

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[Article by Hsieh Kim Suan: "Downstream Ventures Multiply"]

[Text]

EARNING the country 95 per cent of her total revenue, the UAE's petroleum industry has developed to a level far removed from the day—January 19, 1936—when the first oil agreement was signed between Abu Dhabi and Petroleum Development of Trucial Coast Limited.

From just granting concession rights to foreign oil companies, the UAE has moved into sophisticated, high-technology downstream activities in the industry. The country is expected to produce a record 41.4 million tons of petroleum products by the end of this year.

Last year the country's only two refineries produced seven metric tons of petroleum products, using on average 149,000 barrels of crude a day (BPD). About two million tons of the production were used locally and the rest was exported.

As the country celebrates 15th National Day, inroads are being made into untapped areas of the industry.

In Abu Dhabi, the largest oil producing emirate, producing between 65 and 75 per cent of the UAE's one million BPD quota allocated by Opec, the government agency Abu Dhabi National Oil Company (Adnoc) is looking into manufacturing lubricating oil and tar from the by-products of its refineries.

According to reports, the project is expected to have an initial capacity of 200,000 tons per year while the production of tar would be in the vicinity of 100,000 tons. Such an amount is not only expected to meet the national needs but also that of the neighbouring states. The project is being carefully evaluated for its commercial viability.

Last month, Adnoc's hydrocracker unit at Ruwais

came on stream. The plant, whose construction began in 1982, upgrades the atmospheric residues of the refineries into light and middle distillates such as naphtha, kerosene, high octane petrol, LPG and diesel.

The hydrocracker complex consists of six units including a vacuum distillation unit with a capacity of 46,000 bpd, hydrogen production unit of 53 million cubic feet capacity, vacuum gas oil hydrocracking unit with a capacity of 27,000 bpd, sour water stripper at 26.5 cubic metre per hour, acid gas removal unit at 9,500 cubic feet per hour and sulphur recovery unit at 49 tons per day.

Adnoc is also planning to increase the capacity of the Ruwais Refinery to 300,000 bpd from the present 120,000 bpd. The company is gearing up to meet additional aviation fuel needs in the country when the airports now under construction in Al Ain and Fujairah open to traffic within the next three years.

Earlier in the year, its production of aviation fuel as compared to other products had been stepped up. The two refineries produce about eight different qualities of fuel. The Umm Al Nar Refinery whose production was increased from 15,000 bpd to 75,000 bpd is likely to provide the larger quantity of aviation fuel to the two airports.

Efforts are also being made to expand the crude output. Adnoc has an ambitious five-year programme to increase the output of its field in Bu Haza. An increase of 500,000 bpd has been envisaged.

During the five-year period, nearly 212 wells will be treated and water injection projects would be launched. It is expected that all the producing wells in the field would be covered. During the first phase of the project, a vast network of pipelines will be laid out to carry the crude coming in from different wells to the gathering station.

The second phase will be devoted mainly to improving the process of separating oil and gas. It is believed that by controlling the output of accompanied gas, it would be possible to improve the quality of crude. Sophisticated equipment would thus be used for better separation process.

Last year, Adnoc's wholly owned subsidiary, National Drilling Company, drilled about 400,000 feet, using 12 rigs. Over a hundred wells were worked on and they include 34 development wells and 15 exploratory wells. NDC has developed to the stage of being able to now take on contracts beyond the country's borders.

Another arm of Adnoc, (of which it is 50 per cent partner), International Petroleum Investment Company (IPIC) plans to invest in refining and petroleum distribution networks abroad. It would provide Adnoc with access to new outlets for its crude as well as petroleum products. IPIC will initially concentrate on the downstream side

of the business and look at investing in refineries and distribution networks in Europe, North America or the Far East.

In Dubai, exploration activities are at a record level. Nine oil companies are working over 10,000 sq.km of onshore and offshore concession areas. Dubai Petroleum Company noted in its annual review that exploration continued to be of prime importance in its drilling programme.

DPC last year drilled 21 new development wells and worked over 10 of its existing wells in the four oilfields it operates in concessions offshore Dubai.

Five of the new wells were drilled in Fateh, the biggest and oldest of the DPC fields; it has been continuously developed since discovery in 1966.

Seven new wells were drilled in Southwest Fateh where a production platform was installed last year along with a new Central Production Facility platform. This platform, which was expected to become operational this year, will not contain any wells but will serve as a riser to collect and process future production from other platforms in the field.

Until last year, Dubai's oilfields were all offshore. Its first onshore field, Margham, was inaugurated in December last year. The plant at the field processes 25,000 bpd of condensate, and takes the oil production of Dubai up to 400,000 bpd.

The huge plant consists of a gas processing unit, gas reinjection system, utility offices, pipeline to Jebel Ali and tanker loading facility. The plant has two 35,000 horsepower compressors, used to reinject gas into the oil reservoir. The reinjection not only helps maintain the necessary pressure on the reservoir, but also preserves the gas for future use.

At present only condensate is being extracted from the wet gas drawn from nine of the 12 wells, the remaining three being used for reinjection.

In downstream industries, a lubricant oil plant is being set up by a private oil company, BP Arabian Agencies. It is estimated to cost \$12 million and is expected to be completed by the end of 1986. It will produce the full range of automotive and industrial lubricants. The plant is to have a capacity of 20,000 tonnes per single shift and be located in the Jebel Ali Port zone.

In Sharjah, exploratory drilling is also being extensively carried out. The emirate opened up a new structure to the west of the present onshore field, Sajaa. Drilling here started at the end of last year and by August this year three wildcat wells had been drilled but all in vain. The exploration follows a 400km seismic survey done last year.

The Sajaa field is now producing 60,000 bpd of condensate from 500 million cubic feet of gas. The production comes from 15 wells, 14 of which are at Sajaa and the 15th at Mouwee.

Sajaa, which is estimated to have reserves of over seven trillion cubic feet of gas, has been developed at a rapid pace since its discovery in December 1980. Its gas processing facility was set up in June 1982.

There is also active search for new reserves offshore. Production from the Mubarak Offshore Field, discovered in 1972, has declined substantially from a peak of 51,000 bpd to around 10,000 bpd last year.

Ras Al Khaimah joined the oil producer wagon only two years ago. The emirate is producing between 30,000 bpd and 50,000 bpd. Looking to increase its output, RAK is launching an extensive drilling programme. A new

exploratory well is being drilled under this stepped up search for more oil; by mid-November, the drilling had been completed to more than a third of the depth planned.

Most of the wells in the Saleh Field in RAK have produced oil at depths between 10,000 and 15,000 feet. Saleh now has four production wells.

The emirate's oil interests are being looked after by the government oil agency, Ras Al Khaimah National Oil Company.

Elsewhere in the UAE, the search for oil in commercial quantities goes on. Seismic tests conducted offshore Fujairah have indicated the presence of reserves of up to 250 million barrels. Drilling of the first exploratory well here is likely to start in the first quarter of next year.

Seismic tests in Umm Al Quwain have also shown promise. The emirate granted a 60,000 hectare concession in the south of the emirate to an American oil company in mid-November last year; and a 170,000 hectare concession onshore to three other firms about four months before that.

UAQ is now about to start drilling in the onshore concession. Target depth is to be in the region of 15,000 feet to test the Thama zone.

In Ajman, the focus is now on setting up a used 100,000 bpd capacity refinery. This \$400 million project involves dismantling a mothballed refinery in Milford Haven, Wales, shipping the components over and re-erecting the complex in Ajman. The project has already been delayed once—when the original investors could not find the financing. A new company, Ajman Refinery Company Limited (Arco), has taken over the project.

At the national level, the Oil Ministry is planning on building up an emergency oil stockpile. The ministry undertook a study of the multi-million dollar plan last year. It would provide the country with enough oil and oil products for at least 45 days in an emergency.

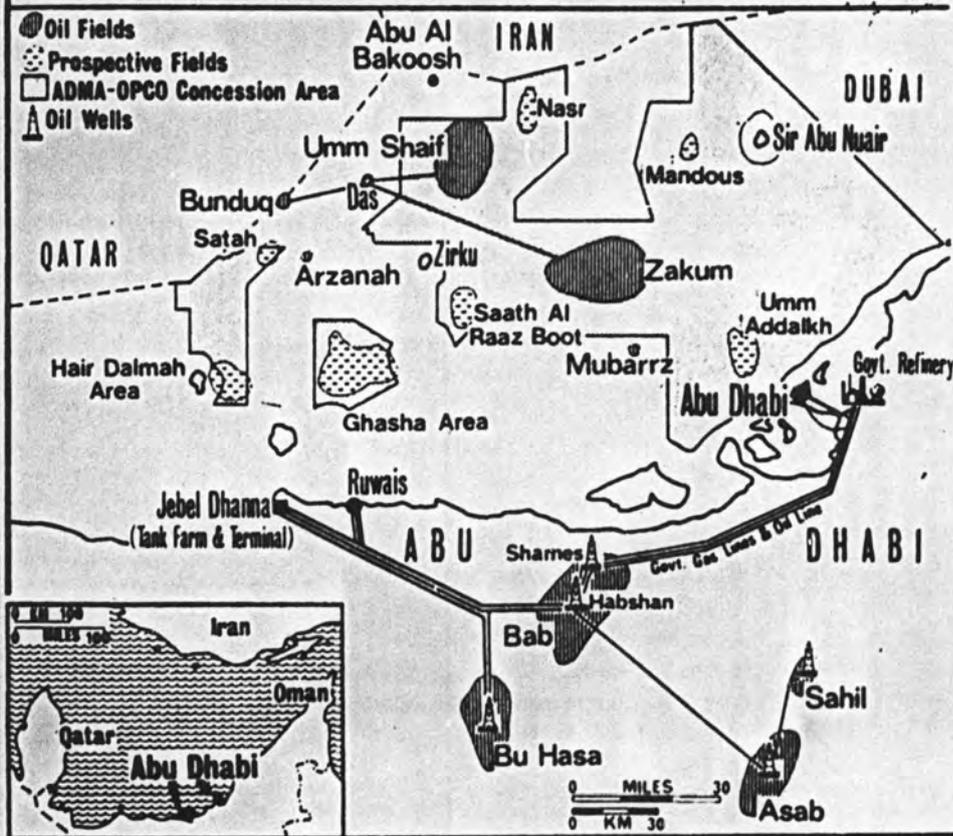
The plan calls for a permanent committee to be set up with full powers over storage, administration and distribution of oil during an emergency. It also suggested that the necessary facilities and pipe network be set up.

Such a network would link Abu Dhabi's two refineries by a 225km pipeline. From the storage tanks at Umm Al Nar, another pipeline would run 95km to Jebel Ali in Dubai. This would be connected via a central storage area to other areas in the Northern Emirates.

According to the ministry study, by 1986 the country would need 47 million gallons of petrol, kerosene, gas oil and fuel oil for a 45-day emergency.

The UAE petroleum reserves are estimated at 32.4 billion barrels which at the current rate of extraction would last 72 years. It also places the country as the seventh among the countries having the world's largest oil reserves.

ABU DHABI'S OIL FIELDS



OUTLINE OF CURRENT DUBAI CONCESSIONS

