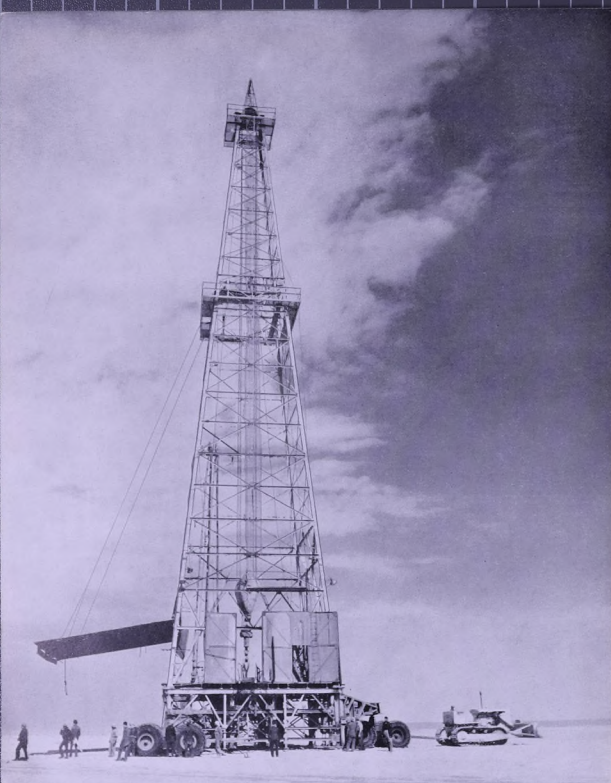


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1953



# Iraq Oil in 1953



Towing rig to new site, Zubair

*Iraq Petroleum Company Limited*

# Iraq Oil

*Basrah Petroleum Company Limited*

# in 1953

*Mosul Petroleum Company Limited*

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## Foreword


*For all Iraqis, rejoicing in the enthronement of their beloved young King, 1953 was a memorable year in which great progress was made towards a new era of prosperity.*

*Production of crude oil went to a steadily increasing rhythm. Kirkuk produced nearly twenty-three million tons as compared with fifteen and a half million in 1952, and in September 1953 reached a cumulative total of a hundred million tons, becoming the eleventh oil field in the world to do so. Production from the Zubair field showed a thirty-seven per cent increase over the previous year, with a 1953 total of three million tons, while the Mosul concession, which in 1952 produced only two hundred and seventy thousand tons, yielded one million three hundred thousand tons in 1953.*

*New records of drilling footage were also established, with a total of 163,618 feet during the year, bringing the total footage drilled by the Companies in Iraq to 1,169,000 feet. During the year oil was found at Rumaila, thirty miles west of Basrah, under conditions similar to those in the Zubair field. The extent of this new field is not yet known, but it is being actively developed, and it is hoped that it will supplement the resources of the Zubair field, in which pressure decline has been rather more rapid than expected.*

*During 1953 the revenues received by the Iraq Government under the 1951 Profit-Sharing Agreement amounted to £51,400,000. Seventy per cent of these revenues are devoted by the Government to capital schemes which will increase the productivity of the soil and enrich the lives of the people.*

*Thus, potential oil wealth, discovered during the reign of King Faisal I, and now transmuted by industry into useful wealth, is being used to harness the rivers of Iraq and bring water to the fruitful soil. The Iraq, Basrah, and Mosul Petroleum Companies are proud to be associated in this great enterprise, and it is their earnest hope that in the reign of King Faisal II peace and plenty may prevail.*



MANAGING DIRECTOR



## Iraq Oil in 1953

The oil of Iraq rose to its highest peak of production in all three concession areas in 1953 with a record total of twenty-seven million tons from the established oilfields. For most of this increase, the Kirkuk field was responsible, yielding nearly eighty-five per cent of the total. This accomplishment was largely due to the completion, late in 1952, of the 30-inch line to Baniyas with its additional pumping units.

The rest of this record output came from Basrah, which was in its second full year of operation, and from Mosul which in its first full year was able, by dint of great effort, to achieve its target of one million tons.

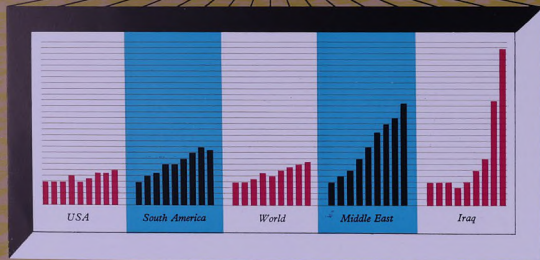
Iraq's oilfields are at unequal stages of development. This fact is due partly to natural factors and partly to the different dates at which concessions were awarded to the Iraq Petroleum Company, the Basrah Petroleum Company, and the Mosul Petroleum Company, respectively. Kirkuk is now firmly recognised as one of the world's largest oil reservoirs; it has already achieved a production which reflects its status. Exploration in Basrah, though very costly on account of the depth of the wells (an average of two miles) has been intensive, and parties have investigated areas as different from each

other as the Southern Desert and the swamps where the unique Marsh Arab still leads his unchanged life. The Mosul area, to judge from discoveries so far, is less rich. Considerable expenditure on exploration among its hills has yielded comparatively disappointing results.

The difference between an established field and one still in the exploratory or development stages can be seen from the following drilling records: at Kirkuk, during 1953, not quite 15,000 feet were drilled, but in the Mosul concession, where, following the discovery of oil at Butmah, the search for new oilfields goes on, this figure was exceeded by over 6,000 feet. And at Basrah, where wells are drilled two miles deep, and the Zubair field was in the phase of intensive development, the footage drilled was no less than eight times that of the established field at Kirkuk.

Yet, however much conditions may vary between the three concessionary areas, and however invidious it would therefore be to make comparisons between them, one thing is common to them all: each strives to perfect its efficiency and to foster good relations between its own organisation and the people of the territory in which it operates.

## Rate of Increase in World Production 1945-53



*The Kirkuk Industrial Training Centre*

## Training

Kirkuk is the longest established centre of the oil industry in Iraq, and is also the centre of that industry's training activities. But nothing is static there. Striking advances are still being made at Kirkuk in training and welfare schemes for Iraqi employees.

### In the United Kingdom

In 1951 the Companies undertook to pay for an annual intake of fifty students, technical and scientific, for further studies in the United Kingdom. The maximum number of such students in Britain at any given time is to be 250, a figure based upon the student potential. This imaginative experiment, subsidised entirely by the Companies, though controlled at the personal level by the Royal Iraqi Embassy in London, is calculated to bring long term benefits to the Kingdom of Iraq. Before leaving for Britain these students pledge themselves that after their training they will work either for the Iraqi Government or for the Companies for double the length of time they spend at their studies in Britain.

Some of these students will go to universities, to take a degree, others to technical colleges, to take a diploma. Once they have mastered the English language, in which instruction in the United Kingdom is given, they show

aptitude of a high order, particularly in such subjects as chemistry, physics, and applied mathematics. The scheme, still in its early stages, should become a progressively sound investment for Iraq.

There is another scheme for training in the United Kingdom to which all three Companies contribute. Employees of the Companies are selected by their respective departments to undergo a period, varying from six to twelve months, of training in Britain. In 1953 a dozen trainees benefited under this scheme, which is proving very successful in improving Iraqi employees' knowledge of specialist trades.

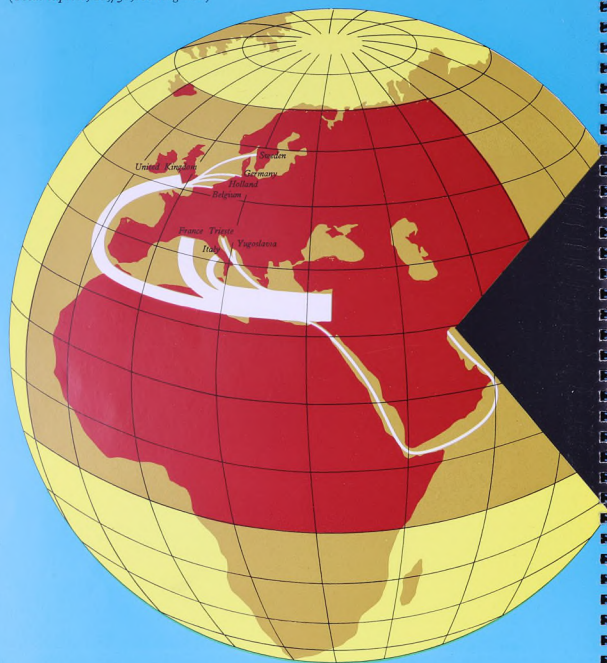
### In Iraq

In Iraq itself, the Industrial Training Centre at Kirkuk is the focal point of the Companies' training. There, training is concentrated upon the practical as opposed to the academic aspect of instruction. In other words, the skill and intellect of young men are directed along channels which will make them better equipped for the oil industry; the aim is a combination of the skill of the hand and the resourcefulness of the mind.

Both English and Arabic are used as languages of instruction, and the British and Iraqi teaching staff is imbued with immense enthusiasm; its zeal is visible and infectious, and its interest in the trainees is by no means confined to the hours spent in teaching.

## Distribution of Iraq Crude Oil in 1953

(Total exports, 26,750,000 long tons)



Crude Oil Shipments



United Kingdom



Belgium and Holland



Germany



France



Italy



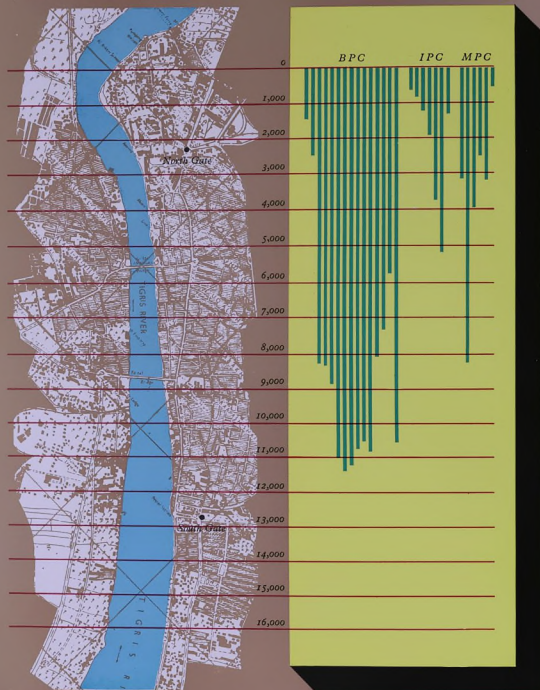
Others

Refining Capacity



## Number and Depth of Wells Drilled in 1953

(To the same scale as map of Baghdad)



The direct distance between the North Gate and the South Gate in Baghdad is approximately 10,500 ft or about two miles



Chemistry laboratory at the Kirkuk Industrial Training Centre

The two main courses at Kirkuk are for apprentices and artisans respectively. Into the apprentices' course, boys aged fifteen to sixteen enter after studying for six years in Government primary schools. The course lasts five years, but already it can be said to be full of rich promise. The lads' response to this scheme, now in its third year, is most encouraging.

Sixty apprentices enter upon this course every year and the staff will be well able to deal with the 300 trainees whom it will have by 1956. Entrance is a much cherished privilege, not gained haphazardly. All candidates submit themselves to a written examination in English and mathematics and are interviewed by a committee, presided over by an Iraqi chairman. It is this committee, unaware of the candidate's identity, which

selects sixty apprentices, solely on the strength of their qualifications.

During their first two years, all apprentices are taught English, Arabic, mathematics, science and engineering; and they are given laboratory and workshop practice. During the second year those apprentices who show signs of special aptitude in engineering (mechanical, electrical and civil), science (physics, chemistry, petroleum testing) or commerce, devote more time to such subjects. In the remaining three years further sub-divisions are made in accordance with the apprentices' particular bent, and more of their time is spent in various departments. About three-quarters of the apprentices are from the Kirkuk area; the remainder come from pipeline stations or from the Basrah or Mosul areas.



The objective is that at the end of the fifth year the apprentices will have attained a standard comparable with that of the National Certificate or the City and Guilds Certificate in the United Kingdom.

The other main course, the artisans' course, occupies two years. This is naturally less academic than the apprentices' course, and only the potential technicians, aged seventeen to twenty, are taken into it. Twenty arti-

sans enter every year. During their first six months they put in full time at the Industrial Training Centre, learning such subjects as English, mathematics, workshop practice, general knowledge, and industrial knowledge; and during the last eighteen months they have only one day a week at the Training Centre, the rest of the time being devoted to practical work in various departments of the Companies.



Commercial courses play a large part in the Companies' training programmes. These courses last nine months. The first three months are spent wholly in the Training Centre; the second three months are divided in the proportion of three-quarters in the Centre and one-quarter in the Companies' offices; and the third three months in the proportion of one-quarter at the Centre and three-quarters in the offices. The syllabus

includes general knowledge, commercial knowledge, typewriting, bookkeeping, and office methods. Twenty men took this valuable, even indispensable, course during the year.

A new development in 1953 concerned what are called 'Training Within Industry' Courses. These, designed for foremen and supervisors, are held weekly in Job Instruction, Job Methods, and Job Relations. They





Relief valves at No.1 Degassing Station, Zubair

constitute an interesting experiment, which has been successfully practised in the United Kingdom and elsewhere. Two courses a week are held, each attended by twelve men.

In an even more striking way, however, the interests of the older employees of the Companies are promoted. Those employees who have not enjoyed the benefit of an apprenticeship are given the opportunity of improving their knowledge by attending evening adult courses. In 1953 these were most enthusiastically supported by upwards of 400 volunteers – a figure which may shortly become 500. Classes are held for three hours every evening (five days a week), and the courses are based upon the need of departments for trained men. Thus there is teaching in such subjects as English, typewriting, bookkeeping, shorthand, filing and so on; and also in chemistry, physics, advanced motor mechanics, and plumbing. As soon as the laboratory equipment of the Training Centre is completed, these older employees will also receive instruction in subjects like electricity, heat engines, hydraulics, and strength of materials. These adult courses last forty weeks.

#### **New and Old**

During 1953 there was a marked tendency among employees of all kinds to take advantage of the opportunities offered by the Training Centre to become skilled workers. These employees' aims may have been limited, but they typified the determination to regenerate an

ancient land like Iraq by means of twentieth century technology. This determination is one which in time will produce wide and beneficial changes beyond the limits of Iraq's oilfields.

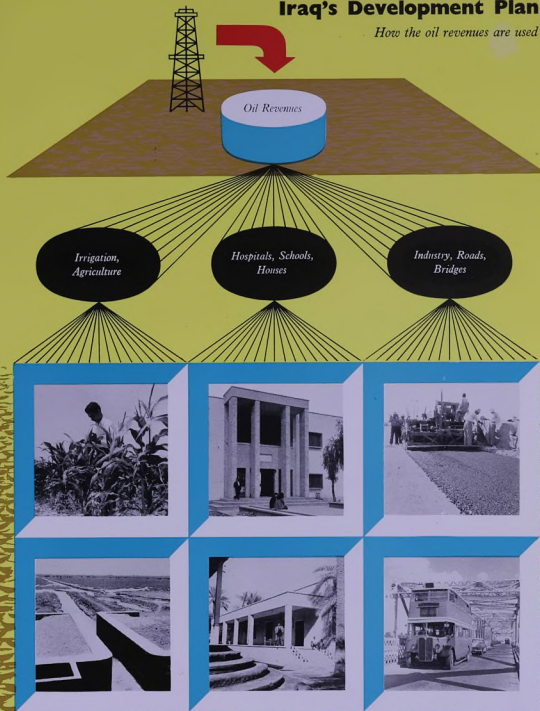
The Kirkuk Industrial Training Centre is the reservoir of the Companies' future manpower. It will provide some of the best technicians for all the oil companies in Iraq. When the magnificent building, already in an advanced stage of construction, is completed, Iraq will have an edifice worthy of the vision and labours which have inspired and fashioned it. More than that, it will exemplify the new spirit in Iraq, the resolve to overcome natural problems by the application of technical skill. Mastery of one new technique contributes inevitably to mastery of others, and what for centuries has seemed uncontrollable water or sterile land in Iraq will in the course of time be transformed for the benefit of the whole nation.

The Basrah Petroleum Company, pursuing its policy of dovetailing its efforts as far as possible with those of local concerns, relied primarily upon the training facilities provided by the Basrah Port Directorate, but also sent selected men for training at Kirkuk.

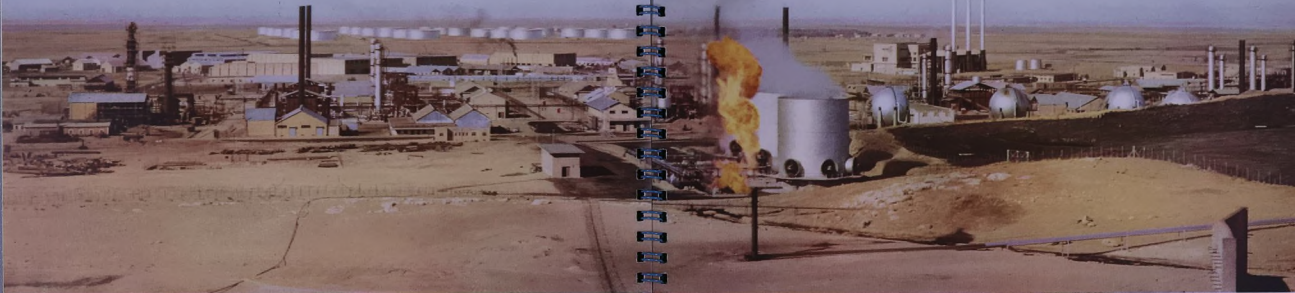
At Ain Zalah, training for lads of fifteen to sixteen was instituted on the shop floor in such subjects as carpentry, mechanical engineering, electric welding, diesel fitting, petroleum and mechanical engineering, and mechanical transport. Additionally, three courses in English were given during 1953 by Iraqi instructors.

## **Iraq's Development Plan**

*How the oil revenues are used*







*Panorama of the Kirkuk industrial area with the KI tank farm gleaming in the background*

These were divided respectively into lessons twice weekly for beginners, intermediate, and more advanced students.

## Community Services

Kirkuk's emphasis upon training during 1953 in no way dimmed the efforts exerted in the sphere of welfare. Services rendered to personnel were manifold. For example, the Joint Consultative Committees, in the main presided over by Iraqi chairmen, did excellent work. They were free to discuss every aspect of an employee's activities except those covered by the Labour Law. An innovation was made during 1953; reports of committee meetings were broadcast through a loudspeaker specially installed in the main canteen.

Seven permanent canteens served regular meals and a number of temporary canteens were established to meet the needs of such as those engaged on drilling locations.

Extensive use was made of the Kirkuk Recreation Centre, with a membership of 450 and a monthly subscription of 150 *fil*s (three shillings). The main sports ground at Arrapha, where football, cricket, tennis and basketball were played, was the scene of strenuous en-

counters; the highlight of the year being the annual sports day in April. It was notable that Iraqis, apart from featuring conspicuously in field and track events and as team members, proved themselves to be very competent referees, umpires, and judges in the various forms of athletics which were witnessed by large and enthusiastic crowds.

In summer, cold drinking water, prepared in the process plant, was issued to the extent of fifteen tons daily. Ice was issued to men at work on out stations, to married quarters, to messes, and to work sites. Workers enjoyed subsidised bus services, as also did children going to school in Kirkuk.

The new cinema at Baba West, a handsomely constructed building seating 300 people, was opened in the autumn. Its immediate and lasting popularity proved that it met a social need, and it was regularly used by children, parents and bachelors. For 100 *fil*s (two shillings) each member of the audience could relax in comfort. Feature films were supplied by a contractor in Baghdad.

At Kirkuk the Savings Group had a prosperous year. The money deposited with the Eastern Bank amounted, in 1953, to over ID150,000\* saved by over 3,600 people – figures which most creditably represented ID45 *per capita* and about eighty per cent of the total strength.

\*The Iraq Dinar (ID) = £1 sterling.



*Athletics and open air games are popular at Kirkuk*



*HM King Faial II was enthroned in May 1953*



*Date-growing: one of Iraq's major industries*

The community services provided at Ain Zalah exactly matched local needs. For instance, a coffee house enjoyed immediate success. Similarly popular were the retail shops, which were governed by the stipulation that their prices should not exceed those prevailing in Mosul. The services and goods supplied included tailoring, provisions, cobbling, greengrocery, haircutting, and *kebab* (cooked meats).

An imposing club, enjoying spacious views, was opened during the summer. It possessed a billiard room, swimming pool, table tennis, refreshment bar, and a library which has a collection of both English and Arabic books, newspapers, and magazines.

Two tennis courts, which will be floodlit at night, so that players can enjoy a game after the heat of the day, were under construction; a new football ground was made nearer to camp than the old one, and basketball and volley ball pitches were also laid down. Ain Zalah certainly had the 'forward look' in 1953.

## Home Ownership

During the year a particularly promising development, planned in the interests of Iraqi employees, got well under way. Known as the 'Home Ownership Scheme',

this project was designed to enable personnel to own their own houses. It operated on the following lines. A shophand, for example, who had become a good machinist, had saved a certain amount of money and wanted to invest in a house for himself and his family: on application to the Company it was explained to him that if he advanced ten per cent of the estimated cost of house and land the Company would not only advance the remainder of the money, but would also help him with free advice at every stage of the construction of the house. The worker himself chose the site, the building contractor, and the design of the house; he decided also the period of years in which he was prepared to make repayment, usually between ten and twenty.

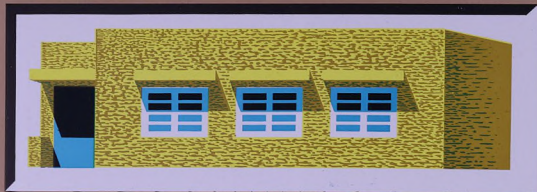
Launched at Kirkuk, this scheme has been enthusiastically received and appeals to the imagination and taste of employees. Eighty-two houses were finished in 1953, and twenty more were under construction at the end of the year. It is estimated that 1,000 employees in Kirkuk wish to own their houses, and the present programme for building is 100 houses in each of the next ten years. Over 400 plots have already been bought.

In Basrah, all the necessary preliminary work for the Home Ownership Scheme had been done by the end of 1953, and by the turn of the year applications were coming in from all classes of personnel.



*Examples of architecture and building methods that are a feature of modern Iraq*

## Home Ownership



An Iraqi employee chooses the site for his house. After discussions with the Land Officer work on the house is started.



From time to time he and his family check progress and, later, move into their new home.



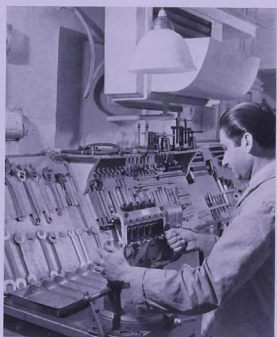
Geologist Sami Nasr shows His Majesty a core at Zubair



New Lesser Zab Bridge linking Baba and Acanah domes



Highly skilled mechanics are essential . . .



for maintaining intricate plant and equipment

## Some Kirkuk Statistics



## Iraq Petroleum Company

The increase in annual production at Kirkuk over the previous year was from 15,552,715 tons to 22,865,538 tons. The coming to fruition of the efforts of past years was dramatically emphasised in September, when Kirkuk's 100-millionth ton of oil was produced. Kirkuk's first well came in in October 1927. Twenty-six years later, forty-four wells in Kirkuk were producing, and filling to capacity the new 30-inch pipeline to Banias, completed in 1952.

Kirkuk has now reached maturity; it is sure of itself; the methods of production and reservoir control evolved in the early 'thirties, and for twenty years applied to the oil-bearing structure known as the Baba Dome, were extended during 1953 to the neighbouring Avana Dome, making possible the great increase in production which took place during the year. Though the drilling figures for 1953 (14,951 feet) are some 1,700 feet lower than those for 1952, the impulse of discovery still animates the Company's activities in this area. The most important discovery in 1953 was that of the Bai Hassan well, quite close to the Lesser Zab. But considerable exploration work and drilling were undertaken on neighbouring structures at Kor Mor and Jambur, and at Palkhana and Chemehamal.

The new bridge over the Lesser Zab was opened by the Mutessarif of Kirkuk Liwa on 24th April. This bridge joins the Kirkuk and Arbil *litwas* and links the Baba and Avana Domes. One thousand four hundred feet long, the bridge conveys crude oil from the Avana district, north of the river, to the process plant at Baba, twenty miles away.

During the year, a ninth stabilisation unit was added to the process plant. Costing half a million pounds with a potential output of seventy thousand barrels a day, and designed to handle distillation in one stage instead of two, this unit was in operation by the end of the year. This addition increases the Kirkuk process plant's capacity to twenty-five million tons annually.

Other construction during 1953 comprised extensions of the main generator house, pump house, and manifolds at K3, necessitated by the increased throughput of oil, and the recommissioning of the old topping plant at K3, for the purpose of supplementing the output of the station's main gas oil plant. The crude distilled in the topping plant is either sent as gas oil by pipeline across the Euphrates for loading on road tankers for national distribution or used for fuel for engines on pipeline stations.



*Part of the process plant at Kirkuk*



*Erecting No.9 stabilisation unit*



*The Unit in operation*

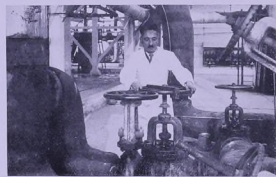




*Over 1,000 tankers loaded at Banias in 1953*

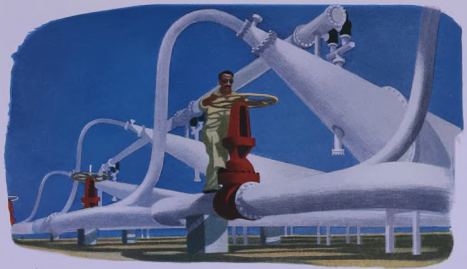
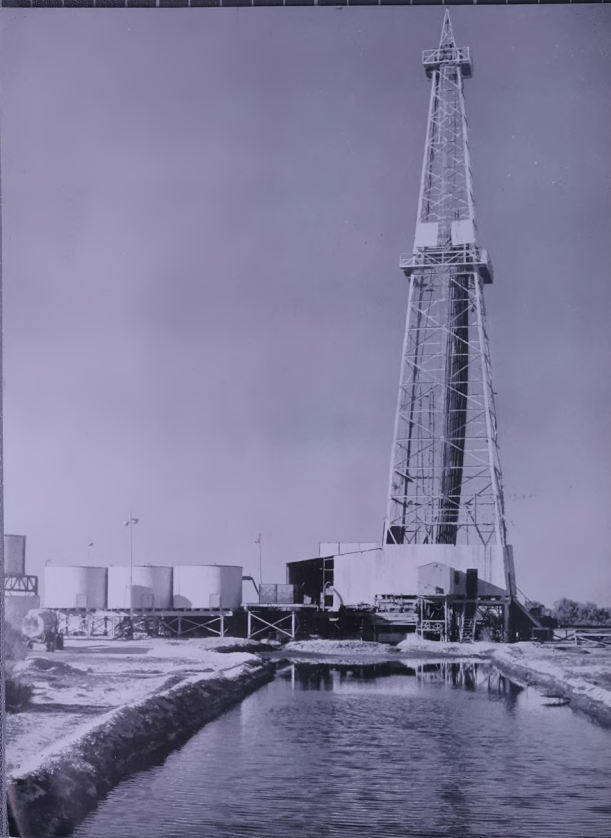


*Examining test well cores*



*Operating valves in process plant*





## Basrah Petroleum Company

Unceasing activity marked the endeavours of this developing company which during 1953 was favoured by a Royal visit. Amid great enthusiasm, King Faisal II and the Crown Prince, the Amir Abdul Illah, on 7th April visited Zubair and lunched at the Barjisiya Bachelors' Mess which is shared by Iraqi, British and American staff.

The most hopeful development of the year was the discovery of a new field at Rumaila, twenty miles west of Zubair. Drilling began on 21st February, on the basis of geophysics, both seismic and gravity methods having been used. Before the end of the year, oil was found in conditions similar to those prevailing at Zubair, but the size of the field cannot be gauged until the results of further drilling are known. At this stage it can only be said that Rumaila is an important new contribution to production in South Iraq.

No place in Iraq could compare in exploration with the Basrah concessionary area during 1953. Geological parties ranged far and wide over the area, deep into the desert by Busaiya, up into the Hor al Hammar Lake, and right up to the borders of Najaf and Karbala. Drilling in the lake was particularly interesting, for it was the first time in Iraq that underwater drilling had been

practised. By the end of 1953 five wells had been successfully drilled within the lake area, necessitating the bunding of roads and of the wells themselves.

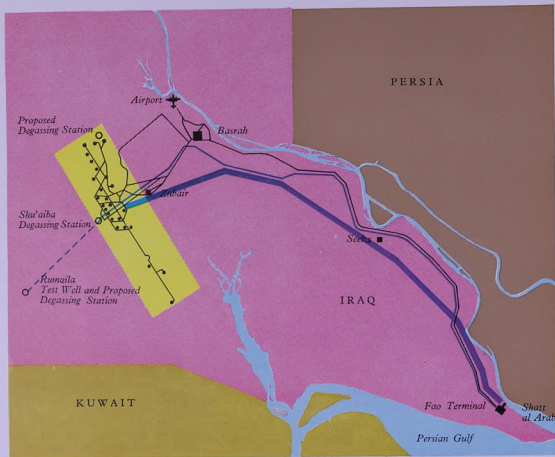
Nor was the actual search for oil unmatched in other activities. The 24-inch pipeline, sixty-five and a half miles long, and, unlike the 12-inch line, buried in a four-foot deep trench, was completed to Fao. By the end of the year this new pipeline, which will enable production to reach eight million tons by the end of 1955, was in partial operation.

At the Fao terminal the year was one rather of construction than of completion, though development was rapid. A third tanker loading jetty is scheduled for use in March 1954, and a fourth in June. The tank farm is being enlarged from eight to eighteen tanks.

New to Zubair, though not to Iraq, was the power house erected in 1953. Brought mostly from Kirkuk, this station consists of three turbo-alternators, each of 2,500 kilowatt capacity.

A second degassing station was added to the Zubair field during the year. By means of the installation of the first completely automatic communications system, using VHF radio beams instead of land lines, the three centres - Zubair, Makinah, and Fao - were connected

Left: In the Basrah concession 127,000 feet were drilled in 1953








over a network of 100 miles. And so the difficulties of desert and salt marsh areas, in which sub-surface water and flooding made land lines impracticable, were overcome.

Twelve wells, including the one at Rumaila, were drilled during the year. The year's footage was 127,142 feet, so bringing the cumulative total drilled in the concessionary area to eighty-three miles. Production from eighteen wells totalled 3,077,522 tons, compared with 1952's production of 2,238,177 tons.

The Company's engineers had a triumph of ingenuity, when they evolved during the year a technique for moving derricks, 136 feet high, on wheeled bogies—a development from the 'skidding' technique, saving considerable loss of time and labour.

#### Key to Map showing BPC Operations

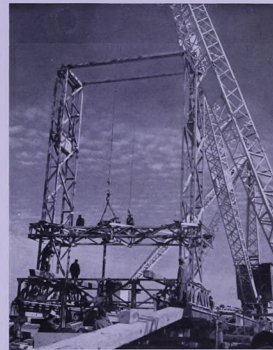
-  Oilwells, Zubair Field
-  24 in Pipeline
-  12 in Pipeline
-  Proposed Pipeline
-  Roads



Fao terminal: the loading manifold

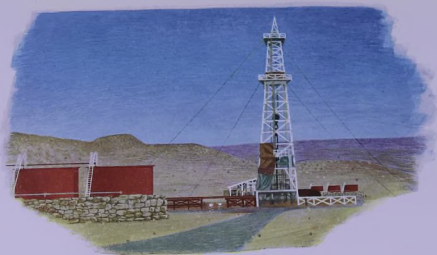


Zubair: drilling well



Fao: new jetty under construction





## Mosul Petroleum Company

Total production in this Company in 1953 was 1,277,139 tons and 21,525 feet were drilled. One exploration well and one development well were completed during the year, at the end of which three rigs were being employed. Five wells were productive, four at Ain Zalah, one at Butmah. Conditions in the Mosul concessionary area are very different from conditions in other areas, as is apparent from the fact that an average well at Kirkuk produces half a million tons, nearly half Mosul's total annual production.

Despite heavy costs and the difficult nature of the terrain, exploration continued increasingly. In the hilly northern section, this was conducted on surface evidence. Elsewhere in the flat desert, geophysical parties were at work throughout the year, using the seismic method. In the south-eastern section of the area, they 'shot' over 600 kilometres of profile. But no evidence suggesting the presence of new reservoirs was recorded. If the area has untapped wealth it has yet to be discovered.



*Ain Zalah*

